

INSIDE DOPE

by GEORGE F. TAUBENECK

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Stories of the Week

Rain kept the kids indoors. Mama was away, and so were grandma and the maid. Nobody was around they could get in the hair of, except themselves.

"Wottle we do now?" challenged Barbie.

"Aw, let's turn on the television."
"How tiresome," scathed Barbie. "All my life I've been looking at television. It's high time something new was invented."

Several "furriners," visiting down Arkansas way, were interested in the famous cawn likker they'd heard so much about. At a shack back in the hills they tried to buy.

"Yep, I got some," growled Zeke. "Whut kind do ye want?"

"Well, it's all corn liquor, isn't it?"

"Yep, both kinds is cawn likkah. But is you needin' courtin' likkah or fightin' likkah?"

Gags of the Week

People who say they sleep like a baby usually haven't got one.

"According to statistics," pontificated Detroit's Mayor Cobo, "a pedestrian is run over every half hour somewhere in the United States."

"How horrible!" remarked a lady. "The poor man!"

One humiliating thing about science is that it is gradually filling our homes with appliances smarter than we are.

People who have true ability never suffer the illusion that they are the only people who have ability.

Scandal is like an egg: when it is hatched it has wings.

"Some women are like watches. They may have pretty hands and shining faces, but are hard to regulate once they're wound up."—*Providence Journal Bulletin*.

"We are beginning to believe that the three R's they teach in school today must be something like the following: Ranting about the boss—refusal to work more than five days a week—rockin' chair pay."—JIM DILLEY.

Mammy's Wisdom

H. C. L. Jackson, author of the witty book, "Dogs, Cats, and People," (published by our Conjure House book division) quotes some delightful philosophy from a Southern Mammy:

"Don't ever tell a lie. You allus has to go back and see how it's gettin' along."

"A creaky door hangs longest."

And, in *re* bald-headed men:
"Nobody puts a marble top on cheap furniture."

Fables of the Week

As a laboratory experiment an ordinary frog was dropped into a pail of boiling water. After convulsive struggles he leaped out to safety.

A brother frog was lowered into a vessel of warm water, which he seemed to like. Slowly the temperature was raised. The frog remained until it was cooked.

Moral: Beware of slowly rising Socialistic tendencies in your group, company, or neighborhood.

Almost disastrously a taxi skidded and careened through city traffic. Friend of ours protested from the back seat.

"Don't worry, Mac," soothed the driver. "I was in Korea, and spent 14 months in a hospital. Ain't aiming to go back."

(Concluded on Page 10, Column 3)

ISSUED EVERY MONDAY AT 450 W. FORT ST., DETROIT 26, MICHIGAN. ESTABLISHED 1926.



AIR CONDITIONING & REFRIGERATION News

Vol. 69, No. 11, Serial No. 1269

July 13, 1953

Subscription Price, \$5 Per Year

Reentered as second-class matter October 3, 1936 at the post office at Detroit, Michigan, under the Act of March 3, 1879. Trade Mark Registered U. S. Patent Office. Copyright 1953, by Business News Publishing Co.

American-Standard Parts Field Trying Air Conditioning Division Is Set Up Uniform Policies on Industrial Discounts

PITTSBURGH — American-Standard warm air heating and cooling equipment is now being handled by a new and separate division of American Radiator & Standard Sanitary Corp. especially created for the purpose.

Called the Sunbeam Air Conditioner Div., the new organization took over all operations of the corporation's former warm air heating department on July 1. It is now responsible for all the company's operations in the air heating and cooling fields, including product development, manufacturing, and distribution.

Executive offices of the new division are in Pittsburgh, with production and distribution operations centered in Elyria, Ohio. Field sales offices will be established in principal cities.

American-Standard officials announced that the formation of the new division was prompted by the increasing importance of the air conditioning industry and by the growth of the company's activities in that field.

The rapidly expanding line of products and growing demand for them have reached the point where specialized and independent operation will best serve the industry and the public, the company believes.

Top executives of the new division (Concluded on Back Page, Column 2)

Five G-E Refrigerator Prices Increased \$10-\$20

LOUISVILLE, Ky. — Increases of \$10 and \$20 in the recommended national retail prices of five refrigerators, effective July 13, have been announced by the General Electric Company.

W. M. Timmerman, general manager of the household refrigerator department, said the increases have been made necessary by increases in material and labor costs.

The new recommended national retail prices and the changes from the present prices will be: LH-11 combination refrigerator-freezer \$529.95 and IM-95 combination \$449.95, up \$20 each; and the LD-87, \$359.95, LB-92, \$299.95, and LA-92, \$279.95, up \$10 each.

Reaction Is Varied On 'Fall Markets'

CHICAGO—The recent announcement that there would be an "Official Fall Market" for the home furnishings industry, to be held at the American Furniture Mart, Oct. 19-23 of this year, has aroused little reaction or interest on the part of the appliance industry.

It was pointed out by some observers that few new appliance lines would be ready for showing at that time, and manufacturers who did have new lines ready probably wouldn't want to show them until some later date.

Salesmen for the furniture industry, however, reacted by attacking the idea. The National Wholesale Furniture Salesmen's Association passed a resolution stating that it believes that not more than two markets per year should be held in any major market centers.

The furniture salesmen also expressed the feeling that the summer market should be set back to July, because retailers are not clear on their buying position until the first of July.

LOS ANGELES—The move to establish an "Industrial Discount" on refrigeration parts and supplies has resulted in fairly uniform policies in this matter, a recent survey of the situation shows.

Henry Ely, secretary of the Refrigeration and Air Conditioning Contractors Association of Southern California, Inc., says in a recent bulletin:

"The Association recently made a survey as to the policies of wholesalers in connection with their sales to industrial users falling in the classifications of meat packers, bakeries and brewers. The Association found the following firms (9 parts and supplies wholesalers listed) are now selling to meat packers, bakeries, and breweries at approximately 25% above the dealer's price which will leave a net profit on the sale of 20%."

The contractors group has been actively seeking the recognition of a realistic price structure which might be applied to industrial users and which would eliminate unfair price advantages in any competition between wholesaler and contractor for the industrial user business.

In another approach to the problem, R. S. Dawson, manufacturers' agent, has met with some success in having his principals inaugurate and publish a "Recommended Discount to Industrial Users." He feels that considerable confusion could be avoided if manufacturers will recognize the differences between certain types of industrial and non-industrial users, (Concluded on Page 4, Column 1)

First Four Months Best Yet For NEMA Freezer Mfrs.

NEW YORK CITY—Piling on another 89,031 units in April, the 26 freezer manufacturers reporting to the National Electrical Manufacturers Association have chalked up their best four months in history this year, figures issued by the association revealed.

For the first four months of 1953, these producers shipped 369,819 freezers, 84% more than they did in the same four months of 1952. Their best previous four months extended from June through September last year. During that period they sold 350,453 freezers.

It took the NEMA firms into July last year to sell an equal number of freezers, the figures showed.

April's total of 89,031 units is the fourth best month reported by the association. It has been topped only (Concluded on Page 23, Column 3)

Chicago Judge Rules Air Conditioner Noise Is 'No Nuisance'; N.Y. Case Up This Week

CHICAGO — Air conditioners cannot be considered as a public nuisance, Judge Jay A. Schiller ruled July 7 in a case in Municipal Court here.

A suit had been brought by Miss Lee Zwigoff against her neighbor, Jack Gordon. Miss Zwigoff testified that the noise of Gordon's second floor window room air conditioner disturbed her sleep. Gordon's attorney produced a physician's certificate stating that conditioned air eased Gordon's heart condition.

"Society must readjust to machines like air conditioners," said Judge Schiller. "I have one in my home, and I find it no nuisance. Case is dismissed."

Texas Boom!

Dallas Mechanical Cooling Sales Up; Other Types Off

DALLAS — Sale of 20,500 room coolers were predicted for sun-parched Dallas this year by the Dallas Power & Light Co.

In addition, the utility anticipates the installation of some 800 new central home air conditioning units this year.

Conceding that almost all commercial establishments are already air conditioned, the power company pointed out that there were 104 industrial establishments air conditioned on May 31 and there would be about 200 with air conditioning before the year was out. At the end of 1951, only a year and a half ago, the utility said, just 14 plants were air conditioned.

MAY NEED TO BORROW POWER

Utility officials predict that on some hot August afternoon, the city will use more than 400,000 kwh, thereby straining its resources which include a recently completed power plant. If the total should exceed 407,000 kwh., the utility said it would have to borrow power from other utilities.

Though the city is rapidly expanding and throwing new loads on the power company, utility officials credit air conditioning with building up the biggest load.

To illustrate, they offered these year by year sales figures for room coolers in Dallas:

1946	0
1947	910
1948	2,265
1949	2,715
1950	4,325
1951	9,107
1952	15,508
1953 (est.)	20,500

Utility officials point out that room coolers are not only becoming spectacularly popular among Dallas citizens, but they are also becoming a dominant factor in the air movement field. They not only far surpass sales of attic fans and evaporative coolers, but the sales of the latter appliances are going down.

DROP NOTED IN OTHER TYPES OF COOLING EQUIPMENT

When room cooler sales really started to boom in 1951, evaporative cooler sales hit a peak of 21,807 units. Then in 1952 evaporative cooler sales dropped to 17,339, and this year they are not expected to exceed 15,000 units.

Attic fan sales hit a peak last year of 7,637 units, but are not expected to pass the 6,000 mark this year.

Kromer To Direct RACCA Activities; Plan Expansion

Program Being Designed To Assist Membership In Business Operations

CHICAGO—Appointment of Ray Kromer, one of the founders of the Refrigeration and Air Conditioning Contractors Association, as executive vice president of the group, was announced recently by George T. Howe, president.

Howe said the appointment will make it possible for the association to launch a comprehensive association program for contractors. He declared that RACCA will provide the patterns, policies, and assistance to guide its members in conducting their businesses in the best interests of the public, the industry, and themselves.

The appointment was made by the officers and directors of the association at a board meeting in Minneapolis last month.

Kromer was a successful refrigeration and air conditioning contractor in Cleveland from 1933 to 1946. During World War II, he banded together the Cleveland contractors who were instrumental in assisting the Refrigeration War Council to obtain a deferment of refrigeration servicemen for a six-months period, according to Howe.

As chairman of the refrigeration service training council, Kromer was charged with the development and administration of a national training program for refrigeration servicemen. (Concluded on Page 4, Column 5)

Mfr.'s Survey Provides Data on Who Purchases Home Freezers and Why

AMANA, Iowa—The typical purchaser of an Amana food freezer buys it primarily for the convenience it provides in storing food. A resident of a small city, with four in his family, he installs an 18-cu. ft. Amana upright freezer in his single family dwelling. His interest in the Amana was stimulated by a dealer salesman.

This was revealed in a study of warranty cards submitted by recent purchasers of Amana freezers.

George C. Foerstner, executive vice president of Amana Refrigeration, Inc., said that the study confirmed the growing preference for larger size upright freezers, and the increasing recognition of the "convenience" factor as the principal advantage the freezer offers. He pointed out, however, that savings possible for the freezer owner through quantity purchase of food was rated a close second as a freezer's principal advantage.

"Standing out in this survey is the overwhelming way it confirms our conviction about the importance of the dealer salesman and the need for continuous sales training," Foerstner (Concluded on Page 4, Column 4)

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Less Meat Shrinkage Adds More Profits, Grocers Told

CHICAGO—A great part of his profit on meats comes from savings made by reducing shrinkage as much as possible, a Hammond, Ind. meat market operator told the National Association of Retail Grocers at its recent convention here.

The meat market operator, Francis Fansler of Morry's Market, said that he increased his meat volume 10 to 12 times by offering higher quality beef.

Another speaker on the "Profitable Meat Merchandising" panel, Keith Rushing of Ames, Iowa, recommended a self-service meat department for retailers whose meat department sales exceed \$2,000 per week.

C. G. Bowes, director of the NARGUS meat division, maintained that there is plenty of room for stores handling all weights and grades of cattle.

On a "Store Modernization and Expansion Panel," George Logan, supermarket operator in Nashville, Tenn., pointed out that "with ever-increasing costs and ever-lower gross margins, it is of first importance that equipment and its locale be selected with a view toward achieving maximum man-hour production."

"We would, therefore, locate each department as close to its storage and preparation area as possible," he stated.

Paul Gillig, Tiffin, Ohio grocer, emphasized the importance of giving plenty of room for shopping. "If the customers fail to have this room," he said, "a great many women just won't shop, and as a result the average sale per customer will drop."

Sunroc To Market Refrigerated Restaurant Milk Dispenser

GLEN RIDDLE, Pa.—The Sunroc Co., water cooler manufacturer here, has announced that it has signed an agreement with Leathers' Sons, of Athens, Ga. to manufacture and market a non-coin operated version of the Leathers' coin-operated refrigerated milk dispenser.

Heretofore, the Leathers' designed milk dispenser has been used exclusively in a large eastern restaurant chain, Sunroc said. The Leathers' dispenser has been approved by the New York City board of health, Sunroc added.

The Leathers' milk dispensers incorporate important exclusive sanitation improvements together with an unusually accurate metering device to control exactly the amount of milk delivered to each glass. Milton Leathers said that the sanitation improvements will be standard in all Sunroc units and the metering device will be available as an extra feature.

The Leathers' designed unit will be marketed by Sunroc through its own division offices around the country. Service facilities are maintained in each division office area.

Sunroc said it expected to offer the unit, despite its higher cost features, at a strictly competitive price.

All-Weather Air Conditioning Set for New Dallas 'Super'

DALLAS — Minyard Food Stores will erect a new 12,600-sq. ft. supermarket at the corner of Irving Blvd. and Hastings St. here featuring year-around air conditioning. The store will have the latest type equipment.

Commercial Refrigeration



THIS SHOPPER makes her selection from Warren's new "Island Merchandiser," a spot-item self-service refrigerated case. In the background is a lineup of "Super Merchandisers" for packaged fresh meats.

Warren Introduces New Line of Open Self-Service Cases for Supermarkets

ATLANTA—The Warren Co., Inc. here recently announced introduction of a completely new line of open self-service commercial refrigerators for supermarkets.

Called "The Super Merchandisers," the line includes an "Island Merchandiser" for spot displays of dairy products and smoked meats, a "Double-Decker" case, a meat case, and a produce display case.

The entire Super Merchandiser line follows the same general design pattern featuring porcelain exterior, available in colors as well as white, highly brightened fluted aluminum trim and aluminum castings, and display fronts made of stainless steel-capped "Thermopane."

Exterior dimensions of the self-contained Island Merchandiser (Model OI) are: length, 55½ in.; width, 32¾ in.; height, 40½ in. Interior dimensions are: length, 47 in.; width, 28 in.; net depth, 8 in.

Features include display guards on all four sides, two steel wire racks in the bottom, 24-tube multi-finned coil with circulator, heavy-duty glass air baffle in each end of the display area, automatic disposal of drainage—"a new Warren feature which eliminates plumbing," invisible permanent casters for quick change of location, and pressure control "for dependable temperatures and efficient defrosting."

Designated model ODD, the Double-Decker comes in 8 and 11-ft. lengths. Exterior finish is white porcelain on front and top, white infrared-ray-baked deluxe enamel on back and ends.

There are removable sectional shelves in each compartment—solid shelves of white porcelain in the bottom, steel-wire shelves with two adjustments in the top section. A plate glass mirror, fluorescent lights, and 3-in. price-tag moulding are other features.

The Double-Decker is equipped with two multi-finned coils—15-tube in the bottom and 8-tube on the back wall—with mechanical circulator (two circulators in the ODD-11). At the front of the upper compartment is a heavy-duty glass air baffle. Natural drain in each compartment is provided.

Warren points out that multi-case construction allows an endless line-up of these Double-Deckers, with one pair of ends. (Similar construction of the meat and produce cases permits an endless meat or produce department of single and/or double-duty models, with one pair of ends.)

Also available in 8 and 11-ft. models, the open meat case can be had with service-from-rear display (OM), front storage (OMS), or rear storage (OMSR). Exterior finish is white porcelain on front, stainless steel top, and white infrared-ray-baked deluxe enamel on ends and back.

Among features of the meat case are: heater strip under the stainless steel channel of the display guard, price-tag moulding, steel-wire shelves, natural drain in each compartment, and multi-finned 16-tube display compartment coil with circulator.

Storage compartments in models OMS and OMSR have insulated doors with black porcelain lining (double-glazed display doors at slight extra charge). The 8-ft. models have two

doors, the 11-ft., three. Door openings are 27¼ in. by 64¼ in. Bottom of door jamb is stainless steel. Ash hardwood racks are in the bottom. A multi-finned 4-tube booster coil supplements refrigeration circulated from the display area.

Produced in 8 and 11-ft. models, the produce cases are available for display only (OV), with storage (OVS), or for non-refrigerated display (OU). They have a white porcelain front and infrared-ray-baked deluxe enamel on back, ends, and top front of the superstructure.

Warren has added a spray-hose attachment to the refrigerated models (available at nominal extra charge on the OU). Also, a paper bag compartment in the front of the OV and OU can be had at a nominal charge.

In conjunction with the produce cases, a "unique" scale stand, approximately 30 in. wide, of exactly the same contour as the cases themselves, and complete with mirror, bag racks, etc., can be fitted into any multi-case joints of these fixtures.

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WIRE & TUBE FREEZER SHELVES

STAINLESS STEEL SHELVES,
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PORCELIZED FINISH

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Advice To Detroit

Keep Vehicle Cooling Systems Under Code, Kirkpatrick Urges

DETROIT—If the city of Detroit exempts automobile air conditioning from its safety code, shouldn't similar systems used to refrigerate trucks be likewise exempted?

This new question has been thrown into the local controversy by an executive of a truck refrigeration firm in a letter to Detroit's City Council, which will act on the proposed amendment to the code.

However, "from our point of view as a manufacturer, we do not believe that any open type refrigeration system should be exempt from the highly praiseworthy Detroit Code," writes Henry O. Kirkpatrick, chief engineer of Dromgold & Glenn Division, Union Asbestos & Rubber Co., Chicago.

"The reason for this opinion is simple. We know from bitter and costly experience that it requires a skilled refrigeration mechanic to properly install and service any refrigeration system," Kirkpatrick says in his letter.

"It appears from the facts in the case that this proposed change in the refrigeration code will ultimately destroy the entire code. If auto air conditioning is exempted, then our truck system is automatically exempt," Kirkpatrick emphasizes.

As his letter to the City Council explains:

"We build and market a line of truck refrigeration systems that are designed along the same basic lines as are the auto air conditioning systems. These systems use Group 1 refrigerants. In fact, we use the same size and make of engine driven compressor that is used on some auto air conditioning systems.

"Our systems are sold and installed in Detroit by truck body builders. To be specific, Detroit Cargo Body Co. is currently in the process of installing a number of our units in truck bodies and it is our understanding that they (Detroit Cargo Co.) have been informed by your Department of Building and Safety Engineering that they must take the necessary steps to conform to the City's refrigeration ordinance or cease this undertaking.

"If Commissioner Joseph P. Wolff is in favor of exempting auto air conditioning installation and service from the code then he will be duty bound to exempt an almost identical system on trucks. After you acquaint yourselves with our system and realize that it is, in fact, merely an adoption of an auto air conditioning system, we believe that you will agree with our thinking in this matter. If, as Mr. Wolff states, he does not think the code was intended to cover auto air conditioning, then he is also duty bound to think likewise as regards our systems . . .

"Therefore, we respectfully urge consideration of all the facts before reaching your decision," he concludes.

Baking Industry Needs Research on Freezing, Says Kroger Official

COLORADO SPRINGS, Colo.—For orderly, time-saving development, the baking industry needs research on freezing on a wide range of specific problems, according to Dr. George Garnatz, director of the Kroger Food Foundation and chairman of the Baking Industry Research Advisory Council.

He emphasized in a talk before the Refrigeration Research Foundation that freezing is actually coming at both retail and wholesale levels and that the need for expanded research is urgent.

Losses from staling, which are avoidable by freezing, are equivalent to consumption of baked goods in a city the size of Philadelphia, he declared. Very large, though inestimable, are the savings possible through improved labor management that freezing would provide, he added. Moderate size bakeries are paying as much as \$200 annually in premium rates for holiday and overtime labor, he said.

Auto Accident In France Kills Carrier Executive

SYRACUSE, N. Y.—John L. McLaughlin, 55, an executive of Carrier Corp., was fatally injured Thursday, July 2, in an automobile accident near Amiens, France. Manager of Carrier's unitary equipment plant here, he was in Europe on a combined business and vacation trip accompanied by his wife and niece.

On completion of the new Thompson Road Plant No. 2 in 1950, McLaughlin became plant manager, a position he held at the time of his fatal accident. His wife, Mrs. Sophie B. McLaughlin, survives him.

Dailey Gets IDI Award For Designing Servel Wonderbar

CHICAGO — Donald Dailey of Evansville, Ind. recently received the Industrial Designers Institute award and medal for his design of the Servel electric Wonderbar, the silent portable refrigerator that was introduced late last year to "bring refrigeration out of the kitchen."

The chairman of the IDI awards committee, Paul R. MacAlister, presented the medal at the third national design award ceremonies held at the Ambassador East hotel, citing Dailey "for the Wonderbar's styling and the pioneer use of plastics in the refrigeration field."

Dailey is vice president in charge of product planning at Servel. He joined the company in 1950 after heading his own firm of industrial design consultants in Philadelphia for four years.

All-Industry Show Visitors Urged To Get Hotel Rooms Now

WASHINGTON, D. C.—Those who expect to attend the 8th All-Industry Refrigeration and Air Conditioning Exposition in Cleveland Nov. 9-12 are urged by the Exposition management to make their hotel reservations as soon as possible.

"The Cleveland Convention Bureau has guaranteed a block of several thousand hotel rooms to the committee," says W. A. Siegfried, general chairman of the Show, "but the only way to be sure of the entire number of rooms is to have reservations in the hands of the hotels long in advance of the Show."

Exhibitors and members of the Air Conditioning and Refrigeration Institute will make the Hollenden hotel their headquarters. The Refrigeration Equipment Wholesalers Association has selected the Cleveland hotel as headquarters. Hotel Carter will be headquarters for Refrigeration Service Engineers Society as well as for the Air Conditioning and Refrigeration Contractors Association. The National Commercial Refrigerator Sales Association will make the Statler its headquarters.

All reservations for hotel accommodations are being handled by the Cleveland Convention Bureau and requests for hotel reservations should be made by writing to Housing Bureau, 8th All-Industry Refrigeration and Air Conditioning Exposition, 511 Terminal Tower, Cleveland. All requests for hotel reservations will be promptly acknowledged and confirmed.

Muntz Challenges Detroit Sunday Closing Ordinance

DETROIT — Detroit's recently passed Sunday closing ordinance for furniture and appliance stores has been challenged in court by Muntz TV, Inc. here.

A Muntz suit entered in Circuit Court charges that the ordinance is unconstitutional as its penalty provisions conflict with state law. The city rule calls for fines up to \$500 or 90 days in jail for violators. The state Sunday closing law provides for a maximum fine of \$10.

Muntz also contends that the ordinance would cause it to suffer considerable economic loss and would force the company to lay off some of its 300 employees.

'Dash for Cash' Spurs St. Louis Freezer Sales

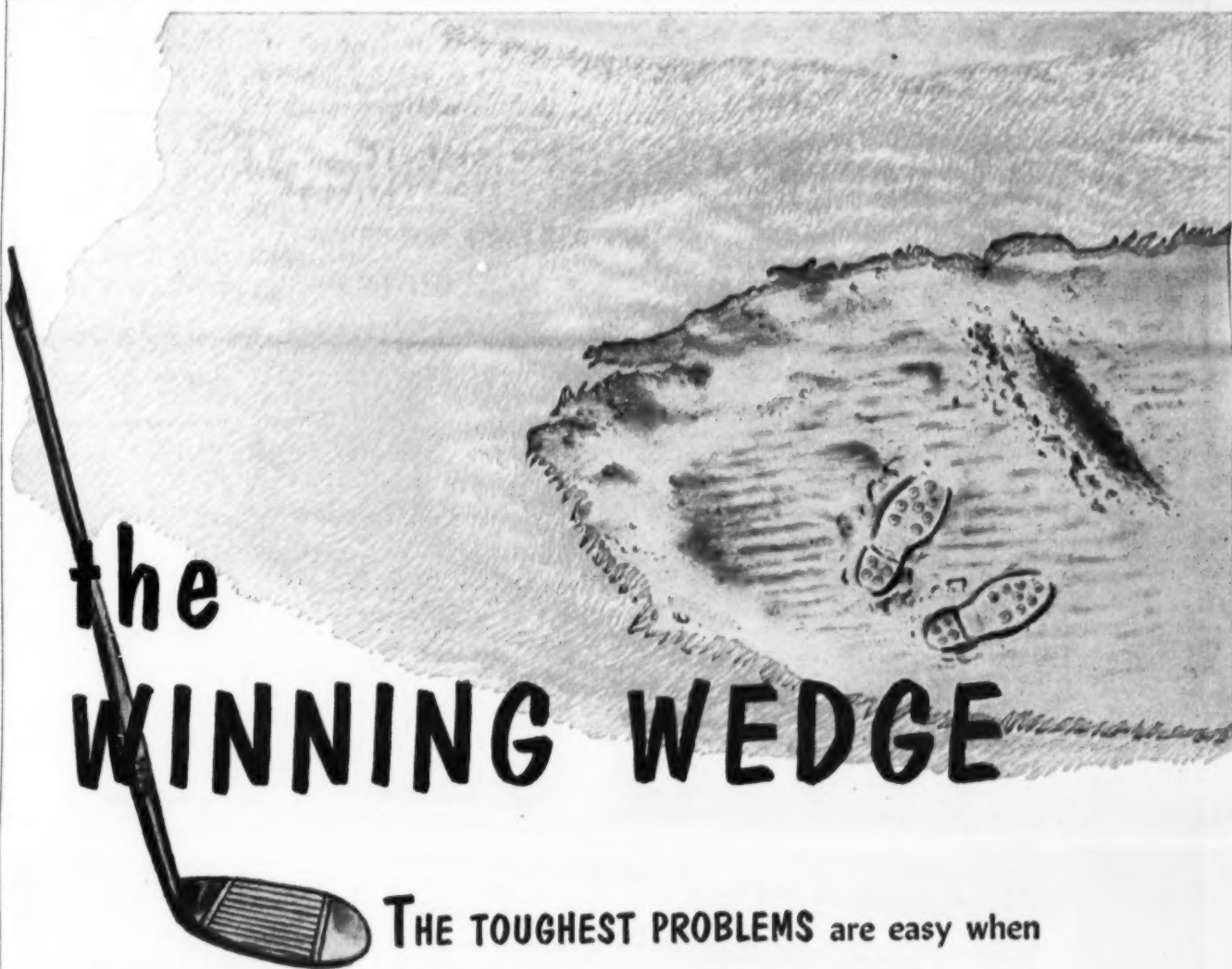
ST. LOUIS—A "Dash for Cash", sponsored by the Union Electric Co., is expected to give retail and wholesale salesmen additional incentive to go after home freezer sales during July.

The utility is offering retail salesmen a \$5 bonus for each of the first three freezers they sell during the month and then raise the ante to \$7.50 when four freezers are sold. Thus, the salesman would receive \$30 for the first four freezers sold. An additional \$7.50 will be awarded for each freezer that is sold after the fourth.

Wholesale salesmen will receive \$1 bonuses for each freezer sold.

To add color to the promotion, the utility sent retailers maps of the northern hemisphere and tagged the sales drive as a race for the north pole. Calling it the coolest trip of the summer, the utility explained that the salesman would reach Duluth at the completion of the first sale and would be labeled a "bushwacker." For the second sale he is moved to Edmonton and becomes a "trekker." For the third sale, he goes to Fairbanks, Alaska and becomes a "musher."

The fourth sale brings the salesman to the north pole. Says the utility: "The final dash for cash earns you a charter membership in the St. Louis Society of Artisans, and puts you in the 'iceberg lettuce' because Artisans earn \$7.50 in cash for each home freezer sale made during the journey—a total of \$30 for their first four sales plus \$7.50 for each freezer sale in excess of four."



The WINNING WEDGE

THE TOUGHEST PROBLEMS are easy when proper knowledge and experience get in there and pitch. Tubing problems, too, are best solved by experts—professionals in their own right. Penn Brass & Copper Company, well-known for quality tubing for over a quarter of a century, has the technical facilities and deep-reaching experience to help you choose the right tubing for your needs. Precision drawn and annealed to strict specifications, Penn seamless tubing is always clean, bright, and uniform in wall thickness. Insist on PENN—the tubing unmatched for quality. For informative refrigeration literature, write "Dept. CR-7."



Ace Self Service Frozen Food Display Cabinets

Designed to do one job . . . SELL MORE FOOD

Unsurpassed for beauty, performance . . . price!

Now available for every need.

Ace Cabinet Corporation
New Bedford, Massachusetts
Exec. Sales Office:
1457 Broadway, New York 36, N. Y.



QUALITY TUBING HAS A "PENN NAME"

PENN BRASS & COPPER COMPANY
ERIE • PENNSYLVANIA • TELEPHONE 3-1164

'Industrial Discount' --

(Concluded from Page 1, Column 3) and recommended realistic price differentials where justified by the nature of the product and methods of distribution.

Refrigeration parts and supplies wholesalers who have discussed the subject point out that the matter is of primary interest only to those who are interested in such a market. Rudy Rudisil of Refrigeration Supplies Distributors feels that wholesalers in general are now selling through accepted trade channels and a "recommended" price applicable to other purchasers may be desirable but that his firm, for example, is not interested in making sales to other than recognized trade channels.

Hal Clay of Authorized Supply Corp. expressed much the same sentiments, and feels that the uncertainty of the present price sheets lies in the "definitions" paragraph and not in the discount column. What confusion exists he believes lies in interpreting and applying the definitions.

The sentiment was expressed that representative industry segments should unscramble such terms as "distributor," "OEM account," "industrial user," "national account," "dealer," "contractor," "service organization," "consumer," "government body," etc.

It was pointed out that one manufacturer's "industrial user" was another's "national account."

WHY WAIT?

Get your new product info pronto. Use coupon on "What's New" page this issue.

Frozen Food Makes 14-Day Coast-to-Coast Trip**No Re-Icing Required with New Type of Mechanical Refrigeration for Railroad Cars**

LA CROSSE, Wis.—Reportedly the largest railroad refrigerator shipment of frozen food, and the first commercial shipment of this type of car by the Santa Fe Railroad, reached the east coast recently from California growers, without benefit of the usual salt-and-ice refrigeration.

The car was equipped with a new type of mechanical refrigeration for railroad refrigeration cars. The refrigeration equipment was made by The Trane Co. here.

A carload of Snow-Crop frozen strawberries for over a half-million appetites in the Jersey City, N. J. area sped through the oven-heat of the Mojave Desert . . . over the hot prairies of the Midwest . . . without a pause for the normal re-icing every 24 hours enroute.

Time elapsed for this shipment was 14 days, since the car was held on a siding before unloading. Yet at the time of unloading, temperature of the frozen strawberries was -10° F.

The strawberry-loaded car was Santa Fe's first transcontinental commercial shipment in normal service in an SFRD mechanical refrigerated car, although many test runs have been made during the past five years as part of the joint Santa Fe-Trane development program. The strawberry shipment added up to 126,000 lbs. valued at \$28,500.

A similar "history-making" car went on display on the exhibit track at the national convention of the

Railway Supply Manufacturers Association at Atlantic City recently.

Mechanical refrigeration is expected to eliminate spoilage, reduce pre-cooling time and corrosion damage to car running gear and track equipment by eliminating brine drip-page.

It is also expected to increase flexibility of shipping because cars can be sidetracked for indefinite periods without requiring icing, and revenue from cars because mechanical refrigeration equipment occupies less space than ice bunkers.

The Trane mechanical refrigeration system for railroad cars is a self-powered, diesel-driven unit that is completely self-contained. Mechanical refrigerated cars are now in operation and test by leading railroads, including Santa Fe, Pacific Fruit Express, and Canadian Pacific. Dual-purpose cars for either sub-zero shipment of frozen foods or shipment of fresh produce are in use.

According to Trane, during the hundreds of shipments of valuable frozen produce and meats, there has never been a cargo lost by spoilage from failure of the mechanical refrigeration system.

Rogers & Clary Open New Store

DALLAS—Rogers & Clary, Inc., air conditioning dealer, recently announced the opening of a new store at 359 West Jefferson St., Oak Cliff.

The Food Freezer's Greatest Advantages are:

	1st choice	2nd choice	3rd choice	4th choice
Convenience of storing food	45.4%	38.7%	21.4%	4.2%
Savings by quantity purchasing	44.1%	35.4%	11.6%	11.9%
Nutritional value	8.0%	24.3%	63.0%	20.0%
Other**	2.5%	1.6%	4.0%	63.9%

**Other advantages named most were ability to store own produce and butchering, cutting number of shopping trips.

Freezer Survey---

(Concluded from Page 1, Column 5) said. He cited this as proof: 58.6% of Amana freezer purchasers report that their interest in the product was stimulated by the dealer salesman.

Another striking revelation of the survey is the fact 30.9% of the freezers covered in the survey are installed in kitchens. Following are basements, with 26.7% of the installations and utility rooms, with 16.2%.

Following is a compilation of replies to questions on the warranty cards:

Where Installed?

Kitchen	30.9%
Basement	26.7%
Utility Room	16.2%
Garage	9.9%
Porch	9.0%
Other	7.3%

Number in Family?

Four	33.5%
Three	18.5%
Two	17.7%
Five	17.2%
Six	6.8%
Seven	3.3%
Eight	1.2%
One . . . . .	.8%
Other . . . . .	.8%
Nine . . . . .	.2%

Resident?

City	42.5%
Suburban	33.4%
Rural	24.1%

Type Home:

Single Family Dwelling	87.1%
Apartment	7.1%
Duplex	5.8%

Interest in Freezer Stimulated by:

Dealer Salesman	58.6%
Other*	29.1%
Magazine Ad	5.9%
Newspaper Ad	3.9%
Home Ec. Demonstration	2.5%

*Principal other factors named were: Friends recommendations, Television, Radio

Room Cooler Law Suit --

(Concluded from Page 1, Column 4) scheduled to appear before Magistrate Schanzer to defend themselves against the charges of Mrs. Esther Gershberg, the neighbor who claims her sleep has been disturbed since June 15 when Arkow's air conditioner was first turned on.

She is bringing action under section 435.5.0 of the municipal administrative code which prohibits "unreasonably loud, disturbing, and unnecessary noise."

When filing her complaint, Mrs. Gershberg noted: "My neighbor (Arkow) has a delicatessen store in the neighborhood. He likes the air conditioning so much that he even has his store air conditioned. We complained about the noise his bedroom conditioner makes, but he just laughs it off."

Arkow maintains that he runs his cooler at low speed to minimize the noise at night. But he firmly stated that he works hard all day and is tired at night. He feels he is entitled to a good night's rest.

Mrs. Gershberg, however, found the magistrate sympathetic to her point of view. It seems that he, too, has a neighbor with an air conditioner that disturbs his sleep.

Freez King Corp. Adds 96 Distributors In All States

CHICAGO—Alvin D. Rose, general sales manager for the Freez King Corp. has announced that since January, a total of 96 distributors have been added to the Freez King roster.

As a result of this distributor expansion, Freez King, which makes continuous soft ice cream freezers, now has distribution in all 48 states, although some areas in a few states remain open. Rose said.

In addition to the distributors appointed in the United States, distributors have been appointed for Cuba, Venezuela, Columbia, Puerto Rico, the Dominican Republic, Mexico, and Alaska.

RACCA--

(Concluded from Page 1, Column 5) His job was to provide the industry with manpower so that shortages would not exist when the six-months deferrals expired.

Howe said that this program not only added hundreds of men to the ranks of servicemen but organized local contractor groups throughout the nation. Kromer then helped band the local groups together into a national association.

As their first chairman, he was accorded a life-time paid membership and continued serving as a committee chairman.

Frost Heaving, Humidity Measurement Research Projects Started by TRRF

COLORADO SPRINGS, Colo.—Two new research projects by the Refrigeration Research Foundation are scheduled to start this month. H. C. Diehl, director of the Foundation announced recently.

One will explore frost heaving in soils adjacent to refrigerated spaces, while the other will look toward the development of an instrument for the measurement of humidity in refrigerated storage rooms.

The frost heaving project will be conducted under the leadership of Prof. R. C. Jordan, head of the department of mechanical engineering at the University of Minnesota.

General objective of the research is lower cost and greater assurance of protection against frost damage in the new one-story structures used for refrigerated storage.

Once the relationship of soil type, soil water, climate, floor structure, etc. are established, it may be possible to reconstruct damaged floors less expensively and more effectively, as well as lay new floors, Diehl said.

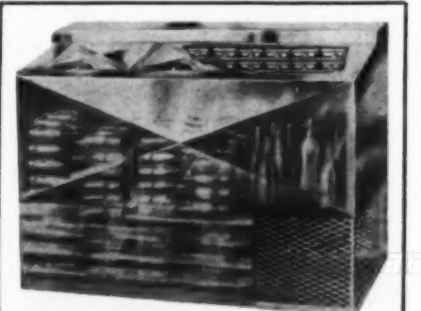
The humidity measurement project will be conducted under the leadership of Dr. C. W. Thornthwaite, professor of climatology at Johns Hopkins university. Here the objective is the better operation of freezer storages.

High humidity in freezers, Diehl asserted, reduces the burden on packages in the prevention of removal of moisture from the products. A necessary tool is the best instrument possible for the measurement of relative humidity in freezers.

"The Foundation has supported a project with this objective at Northwestern university over a period of years," Diehl continued.

"It has succeeded in evaluating existing instruments and in defining the intricacies of the problem of instrumentation. In fact, that project has exceeded the provisions of its plan."

"Dr. Thornthwaite has had extensive experience in what is called 'microclimatology'—the measurement of temperatures and humidities and their variations within confined areas such as buildings and storages, and is thus well qualified for further pursuit of this objective."

**FLO-COLD Stainless Steel DRINKMASTER ICE CUBER-COOLER**

"A CASE OF COOL JUDGMENT."

Mfg. by

United Frigorator Engrs.
Menominee, Mich.

Write for free 8" x 10" photos

Pinnacle Self Service DAIRY and BEVERAGE REFRIGERATORS

HERE ARE THREE SHELVES OF "SELF SERVICE SELLING"

IN THE FLOOR SPACE OF ONE!



Model No. SSDC-528

8'-10" long, 40" wide, 74" high

ALSO AVAILABLE WITHOUT SUPERSTRUCTURE

• All Porcelain and Stainless Steel Panels with exception of outside back and bottom. Ends removable for continuous run installations. Cooled by means of finned gravity coils. Fluorescent lighting, U.L. approved.

FREE FOLDERS OF COMPLETE PINNACLE LINE AVAILABLE.

A few exclusive PINNACLE territory Franchises are still available. Write or wire immediately for full information.

Pinnacle
EQUIPMENT CORPORATION
FLEETWOOD, PENNSYLVANIA

Export Dept.: 39 Broadway, New York



HYDRALINE BASIC UNIT

*Individual Room Control,
Perfect Balance
for:*

**New Homes
Reconditioned
Homes
Stores • Offices
Motels • Hotels
Hospitals • Schools
Factories
and Plants**

BORG-WARNER announces

Hydraline

**A NEW CONCEPT IN YEAR 'ROUND
RECESSED ROOM AIR CONDITIONING
WITH CENTRAL FORCED WATER SYSTEMS**

Developed for the master plumber by Borg-Warner engineering skill, the Hydraline Basic Air Conditioning Unit is a compact, forced-air room air conditioner.

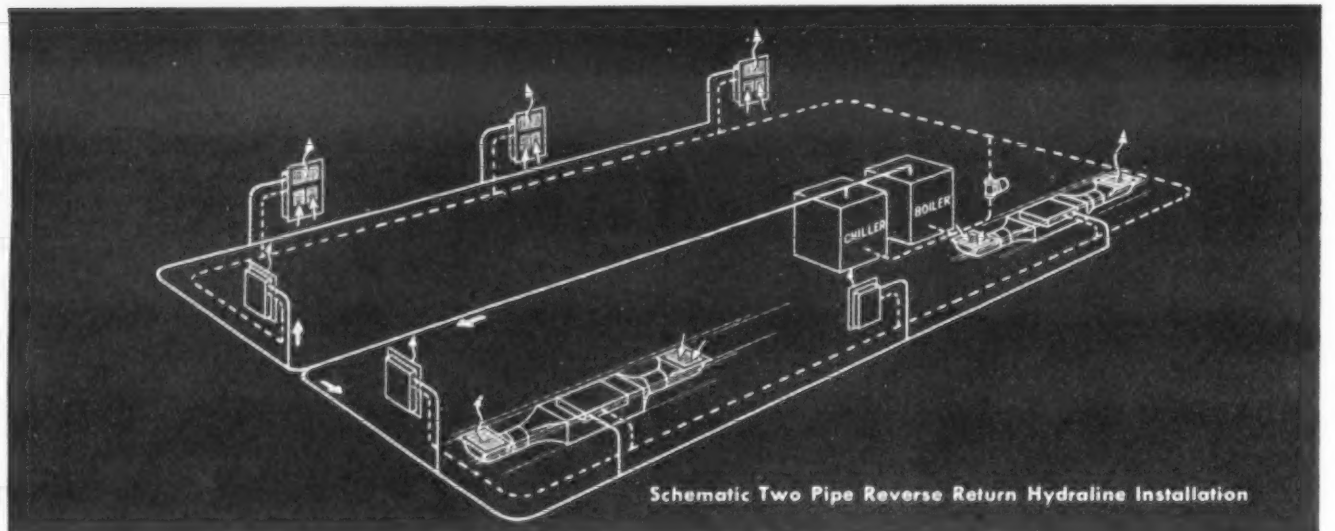
Fully recessed in walls or under floors, Hydraline Basic Units are designed for use with central forced water systems to combine individually room controlled winter heating and summer cooling at the lowest cost in history!

See other side for Hydraline details

Year 'Round *Hydraline* Room Air Conditioners

—can be installed on: (1) two pipe balanced reverse return systems, (2) single or multi-loop Monoflow parallel systems, (3) single or multi-manifold parallel systems. Hydraline Central Boilers, *Chillers, and Accessories are available in all sizes for complete system installations.

*If water at 45°-50°F. is available, no mechanical water chiller may be required.



Why *Hydraline* Products offer the wet heat industry its greatest opportunity

Compact, fully recessed units—Hydraline Basic Air Conditioning Units are only 17 $\frac{3}{4}$ " x 14" x 4 $\frac{3}{4}$ ", and can be installed vertically flush to the wall between 16" studs or horizontally under floors between joists. Occupying no floor space, problems of furniture placement and room decoration are minimized.

Individual Room Control—Each Hydraline unit is equipped with a blower speed manual control. Automatic Control Kits also provide thermostatic control of individual room temperature.

Balanced Distribution—Independent operation of Hydraline units permits perfect temperature balance between rooms with either heating or cooling.

Individual Room Air Filters—Hydraline Units individually filter air as well as heat or cool each room. Filters may easily be removed by releasing the catch on return air registers, and cleaned as regularly as rugs, assuring a permanently dust-free room.

Perimeter Air Circulation—With Hydraline under floor units, location of the discharge register along outside walls and underneath windows free of the drape line, provides the desirable features of perimeter heating. Accessory stack heads for under floor installation are available for all conditions.

Most Sensitive Response—With individual forced air circulation, Hydraline units transfer heat and absorb heat over four times as fast as other forms of forced or central gravity systems, maintaining closest temperature control.

Radiant Panel Combination—With modulating controls, Hydraline Air Conditioning Units can be economically combined with Radiant Panel Heating where such combinations are advisable.

Lowest Possible Cost—Hydraline Air Conditioning Units cost no more than radiators; less than one-half the cost of other types of remote room conditioners; and less than one-third the cost of window-type room conditioners.

Ask your wholesaler for the complete Hydraline catalog or contact us direct by mail or wire.



Hydraline PRODUCTS
BORG-WARNER CORPORATION

346 E. South St., Kalamazoo, Mich.

Water Boilers • Water Chillers • Heat Pumps • Domestic Water Heaters
Air Conditioning Units • Piping and Accessories





Peter Bent Brigham Hospital Will Have \$100,000 Air Conditioning Installation

REVERE, Mass.—Two large air conditioning systems—one for a hospital, the other for a research laboratory—are being completed by Air Conditioning Contractor, Inc., here, Worthington outlet in the greater Boston area.

The firm is completing more than \$100,000 worth of air conditioning for the Peter Bent Brigham hospital, according to M. L. Cail, one of the owners of the contracting firm which was organized late in 1951.

In one section of the hospital a 60-hp. chilled water system is being installed to air condition a dozen operating and recovery rooms. Each room has complete year-round temperature control designed to give absolute conditions at all times.

Also going in the hospital is a 40-ton chilled water system for a number of atomic research laboratories where constant temperature

and humidity conditions are a must to insure accurate laboratory tests.

Air controls are being provided throughout, and the compressor operates on an eight-step control through back pressure unloading.

New research laboratory of the American Optical Co. in Southbridge, Mass. is also being air conditioned by the firm, which is installing 60-hp. of Worthington equipment and 10 air-handling units to provide year-round air conditioning for various laboratories.

Design of the system calls for chilled water to be pumped by a split casing Worthington pump to the 10 air-handling units along with hot water and steam to permit constant temperature and humidity control.

All the test rooms are inside rooms, and therefore outdoor conditions should have little effect on conditions provided in these rooms by the system.

G-E Establishes 2 More Heat Pump Sales Offices

BLOOMFIELD, N. J.—General Electric has announced the opening of additional heat pump sales branches in Los Angeles and Chattanooga, Tenn., according to H. M. Brundage, general manager of the G-E heat pump department.

The two new factory sales branches bring to three the number of such offices opened by the company in line with its marketing development program for the new all-season air conditioner. An office showroom was opened early in April in Birmingham, Ala.

The company plans to open additional sales branches in other areas in the near future, Brundage said.

Brundage said the sales branches were being put in place where the company did not have heat pump distributors. He explained that the company expected to get first-hand information and experience on the special application and sales techniques involved with the heat pump.

On the basis of its experience, the company will help distributors keep pace with the growing consumer interest in the new all-electric, year-round air conditioner, he said.

Buffalo Firm Files Name

BUFFALO—A business name has been filed in the Erie county clerk's office for Atlas Heating & Air Conditioning Co., 1226 Hertel Ave., by Gregory Demakos.

Malone Handles Clime-Matic Line In Missouri, S. Illinois

ST. LOUIS—Appointment of the C. E. Malone Co., Inc. here as factory representative for the "Clime-matic" line of air conditioning equipment manufactured by the United Conditioning Corp. of Croton Falls, N. Y., was announced recently by C. E. Malone.

Malone will cover Missouri and southern Illinois, contacting dealers and distributors. Malone said his company has been active in air conditioning sales since 1946. He added that his men were qualified to engineer and lay out jobs for the small dealer.

The Clime-matic line consists of ½ and ¾-ton window units, package units through 15 tons, and remote units up to 30 tons.

Bills Joins Reube O. Emery In Engineering, Design Post

NASHVILLE, Tenn.—John E. Bills, a graduate of Vanderbilt university, has joined Reube O. Emery as sales engineer and air conditioning design consultant. Emery is a representative for United States Air Conditioning Corp.

Bills was a member of the Air Force during World War II and spent seven months as a prisoner of war in Germany. He had been shot down while on a mission behind the enemy lines.

In England

Bossy Helps Heat Pump To Provide Hot Water

READING, England—Cows and a heat pump team up here to furnish hot water for washing dishes and other uses.

It's part of experimental work being done by a group of scientists at Britain's Electrical Research Association field station here. The experiments are aimed at increasing farm output through use of labor-saving devices.

In the heat pump setup, warm milk drawn from the cows by electric milkers is passed into a cooling unit. Heat extracted from the milk provides the hot water.

Scientists estimate that the milk heat of 40 cows is sufficient for cleaning all the utensils of an average size farm.

State of Illinois Lets Two Office Cooling Contracts

SPRINGFIELD, Ill.—The Illinois state division of architecture and engineering announces that it has recently awarded the Henson Robinson Co. a \$4,577 contract for air conditioning in the offices of the department of aeronautics at Capitol airport here.

At the same time, it was announced that Erio Sales & Engineering Co. of Springfield had received a \$4,759 contract to air condition offices for the department of registration and education in the capitol building.

Packaged Air Conditioner Offer Versatility



INDICATING THE VERSATILITY of packaged air conditioners is this Westinghouse Unitaire installed at the William Reisner & Son Steel Co., located in Clinton, Mass. The unit shown in the background, neatly recessed in the wall, air conditions an open office area as well as two interior offices that are ducted to the Unitaire. Installation was handled by Dedham Sheet Metal Co., Westinghouse distributor.

2 Navy Carriers To Be Air Conditioned

SYRACUSE, N. Y.—Both of the Navy's new aircraft carriers, the U. S. S. *Forrestal* and the U. S. S. *Saratoga*, will be air conditioned.

Carrier Corp. announced that it has been awarded the contract for the second of the two—the U. S. S. *Saratoga*. The U. S. S. *Forrestal* contract was awarded the same firm several months ago.

Six centrifugal cooling machines will be installed in each of the carriers to handle the air conditioning, and seven reciprocating units will take care of ships' stores refrigeration and the cooling of drinking water.

The twin carriers will be the largest fighting ships ever built, according to the company.

Your No.1 DEMAND...
the CONDENSER must be

CLEANABLE

Because...

CLEANABILITY costs no more in the new HM condensers. Tremendous productive capacity has now made even the smallest models (½ H.P.) competitive with non-cleanable units.

CLEANABILITY is available now from many manufacturers who are equipping even their smallest assemblies with cleanable HM condensers in answer to industry demands.

CLEANABILITY prolongs the life of any unit—maintains new-unit efficiency indefinitely by removing corrosion accumulation. A spiral tool does the cleaning job.



Why not insist that your next unit have a CLEANABLE water-cooled condenser?

Especially since leading manufacturers, one after the other, are recognizing the "must" advantages of accessibility to cleaning and are equipping their units accordingly. They realize that initial purchase cost is no higher, and longer life and more economical performance are guaranteed. The CLEANABLE feature enables you to recover new-unit efficiency and thus maintain 100% economical operation indefinitely. In Halstead & Mitchell Cleanable Condensers, water tubes are accessible from both ends on all size models ½ through 25 ton—all water cooled, double tube, counter flow.

HM

Halstead & Mitchell

Wholesalers in Principal Cities—Write for descriptive literature

OFFICES: RESSEMER BUILDING • PITTSBURGH 22, PA.

TORCH-O-MATIC

FOR FASTER, EASIER SOLDERING
BRAZING—MELTING—



THE FULLY AUTOMATIC ON-OFF
AIR-ACETYLENE GAS GUN

Instant, one-hand operation saves time, gas, and eliminates open flame hazards when not in use. Just pull the trigger and the air-acetylene gas lights instantly, release and it's out! As simple as all that, and no "time-out" to light up and adjust. The Torch-o-matic gas gun pays for itself many times

over in savings and convenience. Three sizes of tubes and nozzles to take care of any job. Will fit your present equipment. Halide Leak Detector attachment locates the slightest refrigerant gas leak. Write for the details on how Torch-o-matic can speed your operations and cut down costs.

VELOCITY POWER TOOL COMPANY

201 North Braddock Avenue • Pittsburgh 8, Pa.

Can't Demonstrate, But**Stock Show Booth Offers Texas Appliance Dealer Chance To Show His Line**

FORT STOCKTON, Texas—A. J. Aaron, owner of the Stockton Appliance Co. here, is cashing in on a type of promotion that many western small-town appliance dealers bypass. For the past two years, he has exhibited appliances in a booth at the Pecos County Fair Stock Show held in Fort Stockton.

This event has all the disadvantages that mark many of these local stock shows, including lack of power. But lack of demonstrations did not prevent the company from getting 20 "very hot prospects and between 40 and 50 good future prospects that we should be able to sell before the end of the year," Aaron indicated.

Within a few days after the show, which was held during January, Aaron had closed two sales large enough to cover the expense of the promotion. Present indications are this promotion, plus his other stepped-up sales efforts, resulted in the biggest January in the history of the company.

This has been accomplished in one of the worst drought-stricken areas in the country and one that has been hard hit by last year's breaks in the price of cattle and sheep.

Aaron feels the greatest value of the stock show exhibit lies in the fact he lined up more prospects in a shorter time, and at a lower cost per prospect than would have been possible with any other media available

to him. It also gave him an opportunity to sell his company's service department to future customers.

Follow-up with personal calls is proving the important thing in closing sales to these prospects.

One salesman stays in the store while others make outside calls, so Aaron, himself, is able to devote much of his own time to outside calls, and no ranch is too remote for him.

High cost of electricity here makes electric ranges a luxury few customers can afford, and puts the cost of electric water heating out of reach of most. However, Aaron figures this does not lessen women's interest in cooking regardless of what fuel they use, so he is now completing arrangements to conduct a cooking school with the cooperation of Frigidaire.

His general advertising is limited to an average of 48 inches a week in the local weekly newspaper. Direct mail is used for promotions, and in following up active prospects.

Revco Names Mrs. Hay Asst. Advertising Mgr.

DEERFIELD, Mich.—Mrs. Irene Hay, who joined the Revco secretarial staff in 1951, has been appointed assistant advertising manager, it was announced recently by J. W. Rietzke, Revco sales promotion manager.

Rapid strides are being made with an increased staff under Mrs. Hay's supervision in coordinating advertising activities, Rietzke reports.



Mrs. Irene Hay

Dealers Urged To Seek Revolving Bank Loans

CHICAGO—A revolving loan plan that permits the appliance dealer to pay the bank according to the payments he receives from his customers was cited recently as the best means of financing for the dealer selling on the installment plan.

Robert A. Glick of the Glick Furniture Co., Columbus, Ohio, told the National Retail Furniture Association that the revolving loan plan was so preferable to the call or demand loan that a store doing a large installment volume should apply to out of town bankers to get it, if necessary. He admitted that such credit was hard to obtain.

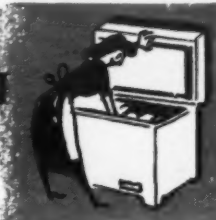
Glick contended that it is better to borrow the money to handle your own time paper rather than sell your accounts. He said that with revolving loans, the cost would amount to only 5 or 6%.

To convince bankers to loan the dealer additional funds, the dealer should show the banker the infinitesimally-small credit losses of time credit home goods stores over the years. He should also educate the banker that the risk is much smaller than on commercial loans.

Glick also advised dealers to make an additional service charge for add-on sales.

Admiral Pays 25-Cent Dividend

CHICAGO—The board of directors of Admiral Corp. has declared a regular quarterly dividend of 25 cents per share on stock outstanding, payable June 30, 1953.

**HOME & FARM FREEZERS****Manufacturer's Freezer-Food Plan****Deepfreeze National Service Would Seek To Eliminate Problems Found In Many Plans Set Up on Local Basis**

NORTH CHICAGO, Ill.—With its "National Cooperative Freezer-Food Service" Deepfreeze will set out to control a freezer-food plan from the manufacturer's level, and thus try to avoid some of the problems that have beset this method of merchandising home freezers.

Distributors who participate will be required to follow a pattern set up by the manufacturer which will cover all phases of the operation. This includes finding a food source, securing, financing, hiring and training salesmen, making proper use of advertising and promotion material, and seeing that a specially developed sales presentation is followed, one which conforms with suggestions of the Better Business Bureau and the Federal Trade Commission.

FOOD SOURCE

Deepfreeze distributors are to make the arrangements with local frozen food distributors to provide foods that will mean savings to consumers. The frozen food distributor is to set prices which will also assure a profit for the grocer.

Only retail food outlets with facilities for cutting and packaging quantity meat purchases will be selected for the program. On the rest of the foods ordered under the plan, the participating food retailer will only forward the food order to the distributor who will do the actual processing on all items except meat. The food sources as well as the appliance dealer will be identified as branches of the freezer-food service.

In the presentation to the customer in the Deepfreeze plan, a set pattern of types and quantities to be sold is set up on the basis of family size and

The presentation will tell the customer the purchase price of the freezer, interest charges, and amount of monthly payments.

Deepfreeze distributors will be expected to provide a trained freezer-food sales manager, who will hire and train salesmen for dealers. These salesmen will be expected to spend their full time on The National Cooperative Freezer-Food Service. The freezer-food sales manager is expected to check their performance.

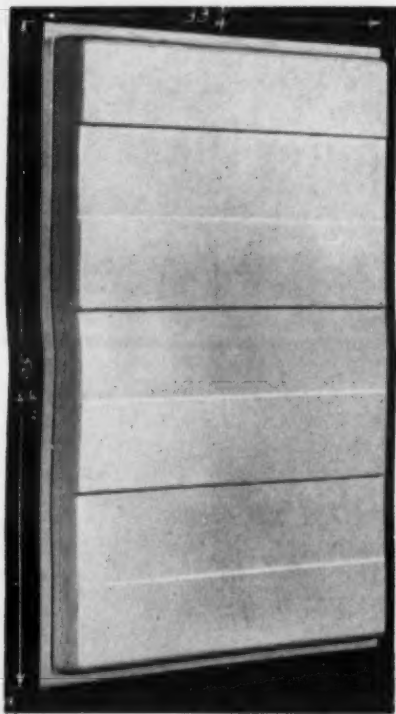
LOW PRESSURE SELLING

The sales plan calls for presentations in the home, and salesmen will be expected to follow a "low-pressure" selling technique and make use of a plan book which Deepfreeze has developed. All salesmen are to be bonded, according to the plan.

The membership application which is to be signed by the purchaser gives all details of the parts played by the various participants in the program. It will indicate the responsibilities of all the participants in the plan and will outline the financial arrangement.

The program calls for the original food order to be financed over a 6-months period. The purchase of the freezer can be financed over 18 months or 24 months.

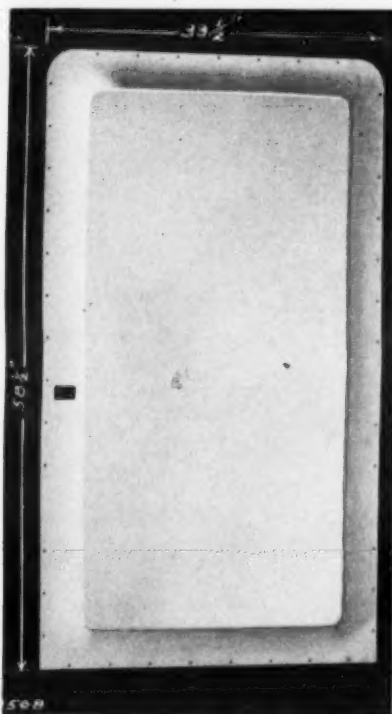
Purchasers will get a NCFPS membership card which will allow a customer to make additional purchases at special prices from participating food stores. Members of the plan will get regular bulletins from the food distributor on special buys, and from the Deepfreeze distributor on recipes and special information on the use of a home freezer.



Four-inch depth shell type



Shelf-ledge formed as integral part of shell



Shallow-drawn pan

Inner Door Panels for Refrigerators

Drawformed of High-impact Styrene Sheet

to meet your most exacting requirements

Regal Plastic is doing a top job in the application of this new material for the refrigeration industry. **LOW TOOLING COSTS** . . . take advantage of Regal's engineering and design staff for assistance in utilizing this new material in your products . . .

Regal also manufactures other accessories including: drip-pans, complete freezer cabinet lids, evaporator doors, drain troughs, breaker frames, room conditioner housings, condensate trays.

REGAL Specializes in Vacuum Forming of Thermoplastic Sheet to Order . . . fully equipped for high and low production runs.

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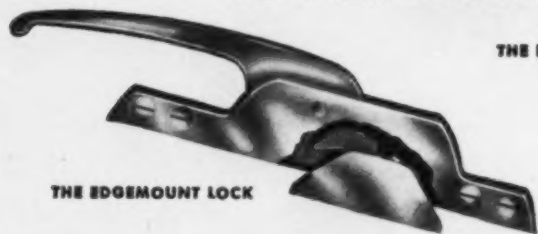
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Features that spell value...

Grand Rapids Brass Refrigerator Hardware

Whether for original equipment or replacement, Grand Rapids Brass locks and hinges provide a rugged, handsome finishing touch that spells quality and value. And they cost no more. That's why leading manufacturers and jobbers specify Grand Rapids Brass. You can be sure with any Grand Rapids Brass lock—when it trips . . . it grips!

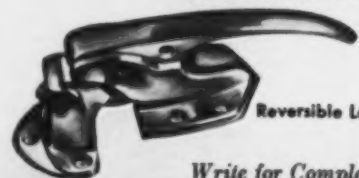
THE ALL-NEW EDMOUNT LINE

THE EDMOUNT HINGE

THE EDMOUNT LOCK

The NEW, heavy-duty Edgemount Lock is chrome-plated, operates easily, installs quickly. Surface-mounting eliminates mortising of wood or stamping. Fully reversible lock mounts on either side of door, handle up or down. Strike adjustment $\frac{3}{8}$ " to $\frac{1}{2}$ ".

Oil impregnated bronze bushings in this hinge provide two-way protection against tension and thrust. Requires no lubrication. A heavy-duty hinge.

THE POPULAR SURFACE-MOUNTED LINE

Reversible Lock



Reversible Hinge

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DIVISION OF CRAMPTON MANUFACTURING COMPANY
GRAND RAPIDS, MICHIGAN

Suppliers to the Nation's Leading Automobile, Refrigeration, and Plumbing Manufacturers

RESTAURANT & BAR EQUIPMENT

Third of a Series

Dishwashing Machine Standards Published by Sanitation Foundation

ANN ARBOR, Mich.—Publication of the third in a series of sanitation standards for the protection of the public in the use of food-service and other health-related equipment has been announced by Dr. Henry F. Vaughan, president of the National Sanitation Foundation and dean of the University of Michigan School of Public Health.

Known as "NSF Standard No. 3, Spray-Type Dishwashing Machines," it is the result of more than two years of work on the part of foundation committees to bring about agreement among manufacturers and health authorities the country over as to what methods of washing dishes, utensils and glasses are satisfactory from the health point of view for use in public eating places.

Charles L. Senn, of the Los Angeles Health Department, headed the Foundation's Joint Committee on Food Equipment Standards. Gale Blakeslee, vice president of G. S. Blakeslee & Co. of Chicago, served as chairman of the "Industry Task Committee." Six committees, representing leading national sanitation organizations and agencies, collaborated in drafting the new standards. The Foundation's Council of Public

Health Consultants, of which Mark D. Hollis, Assistant Surgeon-General of the U. S. Public Health Service is chairman, gave final approval to the health-industry committees' recommendations.

Other standards published so far in the NSF series concern equipment for soda fountains and luncheonettes, and food-service equipment for hotels and restaurants.

The National Sanitation Foundation was established in 1944 as a clearing house, the first of its kind in the world, so far as it is known, through which manufacturers and health officials could meet to determine sanitation specifications for all equipment which, in its use, might affect the public's health.

Sherer Appoints Ballard Asst. Production Mgr.

MARSHALL, Mich.—John H. Coolidge, president of Sherer-Gillet Co., recently announced the appointment of Myron K. Ballard as assistant production manager.

Ballard is a graduate of Western Michigan College, Kalamazoo, and following graduation taught in the Great Lakes Machinist's Service School as an enlisted Navy instructor. This was followed by one year of service aboard a tanker in the Pacific area. He joined the Sherer-Gillet Company in 1946, serving as foreman in various production departments until July 15, 1952 when he was made assistant engineer, a position he held until assuming his new duties.



Myron K. Ballard

George Serfass Joins William Tenny as Partner In Firm

MINNEAPOLIS — H. Blake Thomas, vice president in charge of sales of McQuay, Inc. announces the association of George D. Serfass as partner of William Tenny in the firm Tenny & Serfass located in Los Angeles.

Serfass was previously employed by the York Corp., from which position he resigned to become application engineer for York in their San Francisco and Los Angeles offices until his entrance into the armed service.

During that time he was associated with the San Francisco Ordnance District as a contracting and purchasing officer. Upon his release he was employed by Kilpatrick & Co. of Los Angeles as an air conditioning and industrial refrigeration sales engineer where he remained until his association as partner with Tenny.

Refreshment Concession at War Memorial Provides Big Revenue

Location, Variety of Equipment Make It Easy To Handle Large Crowds

SYRACUSE, N. Y.—Since its opening, the Onondaga County War Memorial Auditorium here has been a thriving success, not only from a community relations standpoint but from a financial aspect as well.

One of the major factors of its financial success has been the refreshment concession operated by a service which specializes in this type of operation. Proof of the service's ability in this particular activity is in the \$92,000 in proceeds it has paid the auditorium commission for the first year's business.

The "key" to the financial success of the concession has been the fast, courteous service of the employees and the fact that they have the use of modern food and beverage serving and storage equipment. On-the-spot facilities are integrated with the food preparation equipment as well as the physical make-up of the building space allotted.

In a quick-sale operation such as this, each piece of equipment has to be strategically located within each of the concession stands to save space and streamline the operation, it was pointed out.

The refrigeration equipment alone consists of 17 Frigidaire beverage coolers for storing and cooling approximately 1,632 cases of bottled beverages, 11 compressors, a 44-cu. ft. reach-in refrigerator, 10 8-cu. ft.



ONE OF THE CONCESSION STANDS at the Onondaga County War Memorial auditorium. Compact arrangement of equipment, single row ice cream cabinet, and the two beverage coolers recessed in the wall provide plenty of work space.

household-type refrigerators, plus ice cream cabinets.

In addition there are three Frigidaire 20-gal. electric water heaters and other type of equipment such as cooking ranges, steam tables, coffee makers, storage bins, etc.

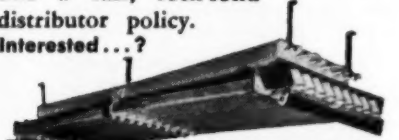
The broad scope of entertainment

and business activities brought into the auditorium has attracted literally thousands of people every week. Most of these people desire refreshment of some kind while attending an event at the auditorium, and consequently make a "beeline" for the concession counters.

Tenny's On the Move!



... with top-flight refrigeration equipment like this coil and pan combination—backed by the finest engineering and a fair, rock-solid distributor policy. Interested...?



Talk it over with
Tenny
ENGINEERING, INCORPORATED
Newark, New Jersey

NOW.. THE ICE-CUBER YOU CAN COUNT ON

FULLY AUTOMATIC

ICE-FLO!

(SINCE 1947)



FIVE ICE-FLO MODELS—

Sizes from 1/2 h.p. to 1 1/2 h.p. The smallest makes 2520 deluxe size cubes daily. The largest delivers 10,800 per day. Pull out storage cabinets hold from 8 to 12 hrs. production.

THE ORIGINAL Solid-Cube Ice Maker for Hotels, Restaurants, Clubs, Bars, Cafeterias, Schools, Hospitals, Institutions, Drug and Chain Stores.

A DOOR-OPENER to better ice service, Ice-Flo automatically produces sparkling clear, solid, extra-large ice cubes in quantity at point of use. They neither mat nor stick together. Freezing compartment is self-cleaning. Cubes last longer in drinks and in storage because they are solid.

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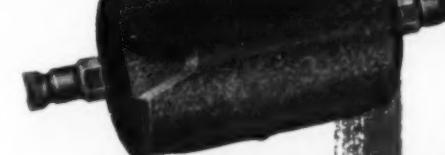
1. FILTERING

INSTEAD OF STRAINING

2. DRYING



SEALED CATCH-ALL



REPLACEABLE CORE CATCH-ALL

Important NEW USE

for **SPORAN Catch-All**
FILTER-DRIERS
on Comfort Cooling and Air Conditioning installations

3. ACID REMOVAL

Everyone knows...

the tremendous advantages Catch-Alls have over ordinary strainers and driers for perfect filtering and drying. But recent tests prove that in addition Catch-Alls remove the harmful corrosive acids which cause the most serious problems in refrigeration systems today! Acids also attack hermetic motor windings, causing costly burnouts. Guard against these failures by always installing Catch-Alls!

Here Are The 5 Exclusive Catch-All Filter-Drier Features that will give you really clean, really dry, acid free refrigeration systems

1. They cannot powder!
2. They cannot pack!
3. The refrigerant cannot channel around the desiccant!
4. The unique, porous Catch-All cores are molded of minute particles of a highly efficient desiccant, the efficiency of which is greater than that of the same desiccant in granular form.
5. They dry down to a low end point... a point so low that any remaining moisture is absolutely harmless!

Don't settle for just any strainer or drier when there's a job to be done in air conditioning or comfort cooling.

DEMAND A SPORAN CATCH-ALL FILTER-DRIER AND GET PEAK PERFORMANCE RIGHT DOWN THE LINE

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Send for YOUR NEW CATCH-ALL BULLETINS Today!

Heat Pump Bibliography Made Available by Edison Electric Institute

NEW YORK CITY—"Bibliography of the Heat Pump Through 1951," a comprehensive listing of about 750 references to published materials on principles, design, operation, and applications of the heat pump, is now available from the Edison Electric Institute.

References in the 30-page bibliography include articles, books, and miscellaneous publications from foreign countries as well as from the United States. Publication dates of the material covered vary from December, 1852, through December, 1951.

Listings are divided into three sections, containing, respectively, signed articles and other publications identified by author, unsigned articles and handbooks identified by publication or publisher, in addition to books which are devoted exclusively to the heat pump.

The bibliography originally was compiled by the staff of the 2701st Research and Development Unit at Battelle Memorial Institute, Columbus, Ohio, for the Signal Corps Engineering Laboratories.

It was published by the Joint Association of Edison Illuminating Companies-Edison Electric Institute Heat Pump Committee through the courtesy of the compilers and by permission of the Signal Corps, United States Army.

The bibliography can be purchased for \$1 a copy from the Edison Electric Institute.

Kehoe To Head Sales for Airtemp In Dayton Area

DAYTON—Jack G. Kehoe has been appointed manager of the Chrysler Airtemp Dayton sales region, J. F. Knoff, Airtemp vice president has announced.



J. G. Kehoe

With Airtemp, Kehoe has administered sales training and sales promotion programs.

Florida State Employees Can't Complain of the Heat

TALLAHASSEE, Fla.—The state cabinet recently approved expenditures of \$11,325 for air conditioning the State Welfare Board office in Jacksonville. It also gave the Highway Patrol permission to spend a total of \$1,225 on air cooling units for its offices at Miami, Lakeland, and Panama City.

State buildings without air conditioning are becoming a rarity. Almost the whole state capitol is cooled now.

The Road Department, Industrial Commission, and Supreme Court buildings here were air conditioned when they were built.

INSIDE DOPE by GEORGE F. TAUBENECK

(Concluded from Page 1, Column 1)

"Oh," sympathized our friend. "Wounded badly, huh?"

"Nah. Didn't get a scratch. I was listed as a psychopathic."

Can You Use This?

A "time compressor" has been invented by University of Illinois researchers. It speeds up words or music without changing tone or ease of understanding. An hour of recording talking easily can be compressed to 45 minutes without loss of effectiveness.

Inventors are Prof. Grant Fairbanks, director of the Speech Research Laboratory; Dean W. L. Everitt of the College of Engineering; and R. P. Jaeger, formerly at Illinois, now with a commercial laboratory.

How the machine works can be described thusly: If you pulled every other board off a fence, and pushed the rest close together, you'd still have a fence, but it would be shorter. If the boards were narrow—and a sign in big letters had been painted on the fence—you still could read it.

Similarly, the "time compressor" chops words or music into little sections, throws part of these away, and places the rest close together. Compressions of 10 per cent cannot

be noticed. More than 50 per cent of the silent pauses can be discarded without destroying understandability.

Scientists have known that the ear is faster than the mouth—that words can be understood more rapidly than they can be spoken. Attempts at talking fast usually fail because the speaker slurs or trips over his words, however. The University of Illinois invention overcomes this by recording speech in condensed form without changing the pitch (which happens when an ordinary recording is speeded up).

With this device radio can "tailor" programs to fit allotted time. A recorded speech an hour and 15 minutes long can be compressed into 59 minutes when broadcast.

Conversely, this invention can "stretch time," too. It's like enlarging the fence by filling gaps between boards with new boards, each painted like the one before it. The resulting fence would be longer, but you still could read the sign.

Another thing the machine can do is to change frequency—or pitch—to a narrow range, without affecting time. A message can be transmitted and then expanded back to its original frequency range at the receiving end. Thus, in the frequency width offered by a radio channel now carrying one message, several—possibly a large number—may be transmitted.

The heart of this Little Gem is a revolving drum with four magnetic tape pick-up heads. An endless loop of tape passes around, and over, erasing and recording heads.

Speed of drum and of tape can be adjusted independently to vary the amount of compression or expansion.

The University of Illinois Foundation has applied for a patent on the invention. Anybody in our industry interested?

Don't You Think Taxes Are Too High?

If you're fed up with taxes—and who isn't—you'll be intrigued by a club called IGHAT (I'm Gonna Holler About Taxes).

Membership has grown mightily since the IGHATs launched a campaign to show the American people how high real taxes are, and to encourage them to work for tax reductions through their representatives in Congress.

Local storekeepers who are in on the "plot" have displayed the number of things we could buy every year with the money Government taxes away from us.

For instance, IGHATs claim you could get two haircuts a month for the next 30 years with money you pay annually to Uncle Sam in hidden taxes. Your wife—with the same amount—could buy a facial a week for five years and a permanent wave once a month for nine years.

IGHATs also claim that even if you're in the low \$3,400 income bracket, you're paying enough in taxes to cover the cost of seven pairs of false teeth; or the cost of prenatal care, birth and hospital fees for five children; or the cost of 60 tons of coal.

Every IGHAT is prepared to show that you and I are paying 150 taxes on a loaf of bread, 206 on a new car, 150 on a lady's hat, and about 100 on an egg. And he can also prove that we're paying more for the taxes on a gallon of gas than for the gas itself.

"This is non-partisan," cautions Mr. John Stuart, who founded IGHAT. "In no way will we say where taxes should be cut, what taxes should be cut, or for how much. This is the job of the representative we sent to Congress. But it is our duty to let them know just how we feel about the issues on which they must vote."

Wisdom of the Week

"A wage based upon competitive ability is just, and leads to frugality and honest industry, and inspires an ambition to attain the highest pos-

sible efficiency, while the equal wage paralyzes ambition and promotes prodigality and indolence. It takes away the strongest incentive to human labor, thrift, and efficiency, and works injustice to employe and employer alike, thus affecting injuriously the whole social and industrial fabric. Experience has demonstrated that a fixed minimum wage means, in the last analysis, a fixed wage; since the employer, being compelled to advance some to a wage higher than their earning capacity, will, to equalize the cost of operation, lower the wage of the more competent to the common basis."—JUSTICE VAN ORSDER, *Children's Hospital of the District of Columbia v. Adkins*, 284 Fed. Rep. 613 (1922).



"Stories
of the
Week"

In Handy
Form

In response to hundreds of requests from AIR CONDITIONING & REFRIGERATION NEWS subscribers, the conductor of its "Inside Dope" column has collected and grouped his best "Stories of the Week." They are now available in convenient book-form for your reading and working pleasure. The book is entitled: "You'll Love This One."

Everyone will enjoy reading this book, we hope, but for the salesman—and for anyone who may be called upon to "say a few words" at a meeting—it should have special appeal.

Here's why: this book of good stories you can tell is printed on thin paper, bound in flexible leatherette, and designed to fit neatly into your inside coat pocket.

While waiting in an ante-room to see Mr. Bigdome, the sales representative can thumb through it and pick out four or five pertinent jokes which are guaranteed to put his prospect in a good mood.

The man about to make a speech—or one who figures he may be asked to rise and shine extemporaneously—can consult it surreptitiously while the toastmaster is doing his stuff. Although it's jam-packed with grand tales, it isn't bulky. Rather, it's unobtrusive. Looks more like a leather wallet than a book.

You can be the life of the party if you've memorized some of the anecdotes in this book. Everybody loves a good story well told—and all the jokes in this book have been tested on tough audiences, both large and intimate, by the author.

Within its 236 thin-paper pages more than 200 sure-fire laughs are presented. You can use it profitably, and so can your friends. It's handsomely turned out, and will make an appreciated gift any time.

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Products of the outstanding manufacturers whose trademark appears on this page depend on ACME to maintain their high standards by using components from the complete Acme line.

Select component parts from this
COMPLETE *Acme* LINE

DRY-EX* WATER CHILLERS

More than 700 combinations from which to choose, assuring you of the most efficient chiller operation obtainable. Capacities from 5 to 260 tons for all common liquid chilling applications.

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More than 120 models and standard sizes of Freon and Ammonia shell and tube, and shell and coil types. Capacities from 1/2 to 700 tons.

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For vegetable storage, packing plants and low temperature installations. 5 distinct series for either Freon or Ammonia with more than 260 combinations.

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Available for use where compactness counts. An all metal tower completely galvanized for long life. Capacities from 3 to 60 tons.

ACME OIL SEPARATORS

A complete line of Freon or Ammonia separators for 1/4 to 100 ton systems.

ACME HEAT EXCHANGERS

Compact, efficient Freon suction and liquid line heat exchangers designed for systems from 3 to 200 tons.

ACME LIQUID RECEIVERS

More than 70 standard sizes for Freon, Ammonia, or other refrigerants.

HI-PEAK* WATER COOLERS

Seven standard sizes providing large storage capacity and all non-ferrous surfaces in contact with the fluid.

ACME EVAPORATIVE CONDENSERS

For Freon or Ammonia. More than 30 models with capacities up to 1,250,000 BTU/hr. from which to choose. Your choice of either copper tubing or pipe coils. Completely hot-dipped galvanized after fabrication. Capacities from 4 to 130 tons.

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FLOW-TEMP* REMOTE ROOM CONDITIONERS

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AIR CONDITIONING (Year-Round Residential)

THIS RANCH-TYPE HOME in suburban West Knolls is one of the first in the country to be fully air conditioned with Chrysler Airtemp's 3-hp. waterless air conditioner. The condensing unit, upper left insert, is located under the roof, almost directly above the furnace. An Airtemp 115,000 B.t.u. oil-fired furnace is located in the basement. The cooling coil is placed in the main furnace air discharge duct. The furnace blower, connected to the year-round thermostat, forces air through the cooling coil and distributes it throughout the home. In the upper right insert are shown the grilles placed in the under side of the 2-ft. overhang.

Ranch Home Built for Cooling

Kalamazoo Builder Displays Suburban House with Airtemp Air-Cooled Year-Round Air Conditioning

KALAMAZOO, Mich.—Air-cooled residential air conditioning—one of the first installations of its type in the country—was unveiled here June 14 in a new ranch-type display home in suburban West Knolls.

Constructed by builder Earl Rushmore, the home features a Chrysler Airtemp year-round air conditioning system. An oil-fired lo-boy furnace

is combined with Airtemp's new air-cooled air conditioning unit.

In the first few weeks after opening day, more than 8,000 Kalamazoo residents toured the new home, first of 23 in the West Knolls plat.

According to William Ahldrich, general manager of the firm that installed the air conditioner, individual interest is high. The firm receives an average of eight to 10 calls daily from persons wanting information on the waterless operation of air-cooled units. Due to high industrial and residential demands, water supplies are a problem in the Kalamazoo area.

An opening day crowd of 5,000 persons toured the home in 80-degree weather. According to Ahldrich, inside temperatures ranged between 72 and 74°, although there were approximately 60 people inside.

The air-cooled installation is what Airtemp terms "remote." The air conditioner is made in two sections, a cooling coil and a condensing unit.

The cooling coil is placed in the main furnace air discharge duct. The condensing unit is remotely located in the garage. "Freon" refrigerant is piped from the condensing unit to the cooling coil and returned through copper tubing.

The furnace blower forces home air through the filter, furnace, and cooling coil, then distributes it throughout the home.

The outside air used to cool the refrigerant—formerly, the job was done with water—is drawn from the home's attached garage and attic.

A two-foot overhang shades the perimeter of the house. Air inlet grilles on the undersides of the overhang permit the outside air to circulate through the attic. This circulation does away with the stifling heat normally found in closed attics during the warm weather.

Although cross ventilation has been

BELOW are shown the two sections of Chrysler Airtemp's remotely-installed air-cooled "custom" air conditioner. The pretty model is seated on the condensing unit; she is holding the cooling coil, which actually cools the home air. A suggested location for the condensing unit is out of doors, near the house, where no air ducts are required.



provided throughout the home, the wide windows are double-glazed for year-round insulation against heat and cold. Also, the need for storm windows has been eliminated. Walls and ceilings have been insulated.

For the two-week period that the unit has been in operation, daily costs have ranged between 42 and 84 cents, it is stated. Ahldrich, however, considers this figure high, since the home has been opened to visitors 12 hours daily. The steady influx of visitors has created exceptionally high demands on the air conditioner.

The builder states that his future program will include air-cooled air conditioning.

The homes are in the \$25,000 class.

Carrier Units Installed In 40 Briar Woods Homes

WHITE PLAINS, N. Y.—Briar Woods, at Hillair Circle, a development of some 40 homes, all air conditioned by Carrier Weathermakers, has been opened, Simon Bernstein, builder, announced recently.

The three-bedroom homes, selling from \$28,500, capitalize on the natural beauty of the wooded hillsides at the site. The 2-ton air conditioners cool and dehumidify in the summer, heat the house in winter, and provide filtered air throughout the home all year round.

The Weathermaker installed by Lakeland Air Conditioning and Sheet Metal Corporation of Peekskill, New York, takes but one square yard.

An ultra modern Hotpoint equipped kitchen with dishwasher, large door shelf refrigerator, custom birch cabinets, formica counter tops, stove and ventilator, is also featured.

Smith and Callahan Added To Trane Co. Sales Force

LA CROSSE, Wis.—The Trane Co. here has announced the appointment of Roy L. Smith to the Philadelphia sales office, and the return of James J. Callahan to the Newark, N. J. sales office after a tour of military duty.

Smith has had 13 years' experience in the air conditioning field in the Philadelphia area. He is a graduate of Carnegie Institute of Technology with a BS in mechanical engineering.

Callahan returns to the Newark office after 24 months active duty in the Navy as a commissioned officer. He was originally assigned to Newark.

Williams Names Marshall Southern Sales Head

BLOOMINGTON, Ill.—R. T. (Dick) Marshall has been appointed sales manager, southern division, for Williams Div. of Eureka Williams Corp., manufacturer of "Oil - O - Matic," "Gas - O - Matic," and "Air-O-Matic" heating and air conditioning equipment.



R. T. Marshall

Marshall will maintain headquarters in Dallas, Texas, and his territory will include southern California, New Mexico, Arizona, Texas, Oklahoma, Arkansas, Louisiana, Mississippi, Alabama, South Carolina, Georgia, and Florida, it was announced by C. S. Stackpole, vice president of Williams Div.

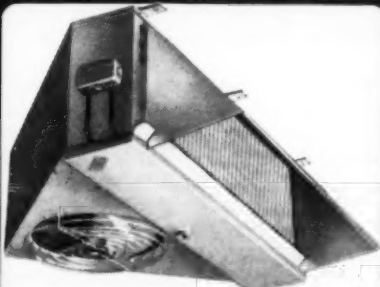
Marshall served as district manager in Dallas and regional manager in the Dayton, Ohio area for Chrysler Airtemp before joining Eureka Williams in 1953.

Previously he served as an officer in the Army Ordnance Department, was sales engineer on heating and air conditioning for J. E. Oliphant & Co., and manager of Marion Air Conditioning Sales Co., Marion, Ohio.

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"DEFROSTAIR" HEAT TRAP COIL



Automatically Defrosts Itself

Rising warm air is confined under hood of refrigeration coil housing within fin and tube area. Coil defrosts completely without warm air escaping into refrigerated zone. No re-evaporation. No special plumbing. Easy to install. Low cost. Field tested since 1944. All patents granted. Defrostairst coil is designed for all low temperature applications and fresh meat rooms below 34° F.

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2—Ammonia Compressors, Frick, Double Action, 10½" x 18" J. T., 140 Ton capacity, 22 lbs. PSI Suction, 185 Lbs. PSI Discharge; directly connected to GE 225 HP, 2300 volt, 2 phase, 180 RPM, 60 cycle motor; with control panel and Motor Generator Set.

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5—Packice Machines, Vilter, 6-Section, Spray Type, with Horizontal Accumulators, Complete with connections & Piping; Louis-Allis 5 HP Motor; with Briquette Press for #1-16 Briquettes.

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These engines are the last word in dependable, trouble-free power, because they're built UP to quality, not down to price. Designed for such heavy-duty vertical shaft applications as truck-mounted refrigerating machinery and similar equipment where prime needs are quick, sure starts, long life, and servicing ease. Oversize alloy steel crankshaft with Tocco-hardened journals; heavy-duty bearing at take-off. Top quality throughout.

Continental Motors Corporation
AIR-COOLED INDUSTRIAL ENGINE DIVISION

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YES—ANY EQUIPMENT IS BETTER WITH CONTINENTAL RED SEAL POWER

Remington 6-Mos. Sales 20% Ahead of All 1952

AUBURN, N. Y. — Preliminary plans for sales of Remington room air conditioners in 1954—based on this season's record-breaking sales successes and a study of competitive operations—was the objective of a three-day national sales planning conference held at Skaneateles, N. Y.

M. L. Judd told his regional and district sales managers from all sections of the country that "sales of Remington room air conditioners for the six months ending April 30 have exceeded by 20% the entire sales for 1952."

Attending from the Auburn office were: Herbert L. Laube, president; C. Kenneth Juno, advertising manager; A. G. Masiello, assistant to Judd; Carl Zauner, national service manager; Carlos Mercado, export manager; Thomas Ward, sales department.

Among the sales managers and representatives attending were: William G. Adair, Memphis; Edward G. Sommerlath, Jr., St. Louis; Samuel Davison, Sr. and Samuel Davison, Jr., Chicago; John D. Moffitt, Boston; William H. Peters, New York City; E. M. Johnson, Philadelphia; William H. Lassiter, H. Rush, and J. Hart, Richmond, Va.; Cecil W. Henderson, Charlotte, N. C.; Lew C. Zicarelli, Jacksonville, Fla.; William H. Moler, Dallas; Frank S. Grott, Cleveland; Robert E. Tweedy, Phoenix, Ariz.; Lorimer Dunlevy, Omaha, Neb.; John Castleman, Louisville, Ky.; William Dennison, Los Angeles; Roy H. Case, Seattle, Wash.; and D. L. Davidson, Cleveland.

Fedders Names Achberger To District Sales Position

BUFFALO—Richard K. Achberger, formerly merchandise manager, Tafel Electric & Supply Co., Lexington, Ky., has been appointed a sales manager for Fedders-Quigan Corp. in the Cleveland district.

His headquarters will be located in Lexington.

Earlier, Achberger was associated with Mid-State Pharmacal Co., Bedford, Ind., and Bendix Aviation, located at South Bend.

Bruce Crockett Joins Brother As Mitchell Representative

MILWAUKEE—Bruce E. Crockett has joined his older brother, William Crockett, in the sales management of the Wisconsin district for the Mitchell Mfg. Co.

He will assist his brother in serving Wisconsin accounts in all three of Mitchell's divisions—room air conditioning, radio and television, and commercial and industrial fluorescent lighting. The Crocketts' headquarters are located here.

Young Crockett is a graduate of Dakota Wesleyan university in South Dakota. He has been coaching and teaching high school for the past five years.

West Penn Dealers Sell 6 Room Coolers to 1 in '52

PITTSBURGH — More than six times as many room coolers were sold during May by dealers in the southwestern Pennsylvania territory served by the West Penn Power Co. than were sold last year, the utility reported recently.

Reporting dealers sold 149 units in May as compared to 23 a year ago. They also sold more home freezers, clothes dryers, and automatic washers than in any other May on record. Clothes dryers showed the biggest gain over last year with a 43% increase. Automatic washers sales were up 25%.

Unit sales for May as compared with May of last year were as follows:

Appliance	May 1952	May 1953
Refrigerators	1,742	1,634
Room Coolers	23	149
Freezers	308	317
Ranges	864	921
Garbage Disposers	36	23
Dishwashers	52	52
Clothes Dryers	184	263
Ironers	107	102
Automatic Washers	399	503
Conventional Washers	1,137	1,218
Water Heaters	374	425

Straus-Frank Names Goodell

BEAUMONT, Texas—Straus-Frank Co. here has announced the appointment of Al Goodell as manager of its Air Conditioning Contracting Dept. in Beaumont, serving Jefferson county and the Sabine area.



SALES MANAGER Joe Garza talks over re-ordering units with Mrs. Haas while her partner-husband spends his time contacting prospects.



GARZA shows a room cooler to a customer who came in, in response to a direct mailing piece. Mailing list offers "bargain specials."

Small Town Dealer Finds...

When You Stop Plugging Room Coolers, Sales Will Fall Off; Good Service Dept. Pays

WESLACO, Texas—Pushing room air conditioner sales exclusively during the summer months helps sell other appliances, but the reverse is not true, declares Mrs. A. Haas, who with her husband owns and operates the Haas Appliance Co. here.

Mrs. Haas said that she learned her lesson last summer. At that time the company would promote room coolers for a few weeks and then switch to washers or refrigerators.

She found that when they stopped plugging room air conditioners, their sales fell off, while washer and refrigerator sales did not go up.

So this year, Mrs. Haas plans to push air conditioning exclusively until late August. During a week of heavy promoting in May, she said, the company sold 17 units. They included nine 1-ton units, six ½-ton units, and two ¼-ton units. In addition the firm sold a 5-ton unit to a small grocery store.

"During April there were 25 room air conditioners sold in Weslaco (a Rio Grande Valley town of 7,500 population) and we sold 21 of them," Mrs. Haas declared. She learned the total number sold from a report from the local utility.

Mrs. Haas noted that the company relies heavily on direct mail for advertising. She also uses radio, but considers the local newspaper, which appears weekly, "too slow" for the appliance business.

She said that the company has a mailing list of 5,000 names. She keeps the list "live" by offering in every mailing some bargain special that will draw a response from the prospect.

Another means she uses to keep the list alive is to stage special events such as "Frigidaire Week" when prizes are offered to persons who come to the store and register. Reg-

istrants are also given a chance to win a major appliance grand prize. Other appliance bargains are promoted during the special week to help draw traffic.

Mrs. Haas also finds the mailings a good opportunity to offer used appliance bargains that help the firm to clear its inventory of trade-ins.

"We have built our reputation on used appliances," Mrs. Haas said. "We will not offer for sale any appliance we cannot guarantee for a full year. We have a large service department to take care of our customers and do all our own rebuilding."

"A trade-in that isn't worth putting into shape so we can sell it with a full year's guarantee, we junk."

"We service what we sell and we have a reputation for doing what we say we will do. That is more effective than offering outlandish allowances on trade-ins."

"Our customers continue trading with us because we have on hand parts to take care of any emergency and skilled mechanics to take care of their service problems."

Omaha Dealers Sell 283 Room Coolers In 5 Mos.

OMAHA, Neb.—Ninety-eight electric appliance dealers in the Omaha area, reporting to the Omaha Public Power District, revealed that room air conditioners sold in the first five months of this year totaled 283 as compared with 65 sold by the same dealers in the same period last year.

The reports also showed that 1,302 electric ranges were sold in the first five months of the year, compared with 1,146 a year ago; water heaters, 588, or up 135; refrigerators, 2,341, up 82; home food freezer, 845, up 191.



CHEVROLET ADVANCE-DESIGN TRUCKS

More work per dollar
... and here are
4 powerful reasons why!

MORE POWER AT LOWER COST! Watch costs go down when you put the new heavy-duty power of Chevrolet's advanced Loadmaster engine to work! The new high-compression ratio of 7.1 to 1 in this great engine brings you more power and even greater economy than before. Chevrolet's Thriftmaster engine, too, in light- and medium-duty models offers exceptional economy of operation.

FACTORY-MATCHED TO THE JOB! Some jobs demand more power. Some demand stronger springs. But, whatever the requirements of your job, Chevrolet trucks are carefully factory-matched to the work to be done, with the right power—and the right units from tires to axle, springs to clutch—to handle that work at lowest cost.

MORE RUGGED THAN EVER! There is extra economy, too, in the exceptional stamina of Chevrolet trucks. You can expect new ruggedness and strength with heavier, more rigid frames and brawnier construction throughout. You can expect extra miles added to the life of your truck, plus a substantial reduction in the over-all cost of hauling.

LOWEST PRICED LINE! Chevrolet trucks are known for qualities and features matched by no other trucks. Yet, with all these advantages, the Chevrolet line lists for less than any other trucks of comparable size and specifications. See your Chevrolet dealer. Chevrolet Division of General Motors, Detroit 2, Michigan.

CHEVROLET ADVANCE-DESIGN TRUCK FEATURES

TWO GREAT VALVE-IN-HEAD ENGINES—the Loadmaster or the Thriftmaster—to give you greater power per gallon, lower cost per load. **POWER-JET CARBURETOR**—for smooth, quick acceleration response. **DIAPHRAGM SPRING CLUTCH**—for easy action engagement. **SYNCHRO-MESH TRANSMISSION**—for fast, smooth shifting. **HYPOID REAR AXLE**—for dependability and long life. **TORQUE-ACTION BRAKES**—on light-duty and medium-duty models and on front of heavy-duty models. **TWIN-ACTION REAR BRAKES**—on heavy-duty models. **DUAL-SHOE PARKING BRAKE**—for greater holding ability on heavy-duty models. **CAB SEAT**—with double deck springs for complete riding comfort. **VENTIPANES**—for improved cab ventilation. **WIDE-BASE WHEELS**—for increased tire mileage. **BALL-GEAR STEERING**—for easier handling. **UNIT-DESIGNED BODIES**—for greater load protection. **ADVANCE-DESIGN STYLING**—for increased comfort and modern appearance.



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TEMPERATURE INDICATORS & RECORDERS



Distributor Salesman Gives His Version Of Where Appliance Dealer Goes Wrong

By John O. Sweet

CHICAGO — "Mr. Average Appliance Dealer" constantly gripes about his suppliers, his competition, and his salesmen but makes little or no attempt to better himself, his store, his displays, or his sales force by taking advantage of selling and other helps offered by distributor salesmen.

That charge was made at the mid-year meeting of the National Appliance & Radio-TV Dealers Association by Roy O'Sullivan, distributor salesman for Peirce-Phelps, Inc., Philadelphia.

His talk was an answer to NARDA past president Mort Farr's speech, made last year before the National Association of Electrical Distributors, in which Farr charged that "the weakest link in the chain of distribution of appliances is the distributor's salesmen."

In defending distributor salesmen as a broad category, O'Sullivan admitted that "many of the charges Mort made are true." But, he said, "I believe that between the manufacturers and the big brass of the distributor organizations these past errors are to some extent being corrected. There is still need for improvement."

He then presented what he termed "a composite picture of Mr. Average Dealer."

THE DEALERS' GRIPES

"He's always complaining about the manufacturers, the distributors, his competition, and his own salesmen," O'Sullivan declared. "According to him, the manufacturers don't make the stuff right and their national advertising stinks. The distributor has lousy discounts and franchises anybody. His competition uses unfair and unethical business practices, runs borax advertising, and cuts 20%. His salesmen are lazy and can't sell. Mr. Dealer is going out of this business any day now. It's no good."

"Now let's see how he looks to the distributor's salesman."

"The distributor's salesman steals literature from his boss, literature that the dealer is supposed to buy, and takes it into the dealer. The dealer is glad to get it—he'll mail it out tomorrow."

"Ten days later the salesman goes back to the store. The literature hasn't been mailed. In fact, nobody knows where it is now. Finally we find it on the floor of a closet, dirty and crumpled."

"The distributor holds a service school but Mr. Dealer never seems to be able to get his men there."

"The distributor has available on a

co-op basis display stands, back-grounds, and signs—material designed to tie in your store with the millions of dollars worth of national advertising spent by the manufacturers. Very few dealers will buy it and if you give it to them, they don't use it.

FROM THE DISTRIBUTORS' SIDE

"Mr. Dealer spends a lot of money so as to have a store with windows on a main street, but his windows get very little attention from him and deservedly get little from the public. Why not move from the expensive location to a back street, board up the windows, and operate like a real discount house at low rents. The dealer gets out of this business what he puts into it, what he deserves."

"The distributor's salesman shows Mr. Dealer how he, the dealer, can make 2 or 3% more if he will buy a dozen pieces instead of one. So the dealer, if he takes advantage of this better price, gives 22% discount instead of the usual 20%."

"The distributor salesman tries to keep his line a little bit clean by refusing to franchise everyone in the block. He refuses to sell the so-called dealer who moves merchandise at 10 bucks over cost. But Mr. Dealer, who has an investment in the franchise, sees nothing wrong in giving the unfranchised dealer a couple of pieces. Mr. Dealer doesn't seem to realize that he's cutting his own throat."

"Mr. Dealer ask for 50-50 advertising money. The salesman gets it for him, leaving the salesman that much less for other dealers. Then 'something comes up' and Mr. Dealer doesn't run the ads."

"Mr. Dealer is enthusiastic about having a promotion with a live demonstration on Friday or at the fireman's fair, with the distributor's salesman in attendance. But after the salesman comes in early from his territory in order to help the dealer, Mr. Dealer has forgotten to hook up the appliance or even to send a sample to the fair."

"The distributor salesman suggests that all the dealers in one section get together for a promotion, maybe listing ads, but Mr. Dealer can't see it—'Sure the ads will help,' but he can't pay \$6; he knows it won't pay him. He wants a free ride."

"Mr. Dealer says his competition cuts too much, but Mr. Dealer cuts too. How much is too much? You know that any cut is too much."

"Mr. Dealer seldom has time for the distributor's salesman to hold sales meetings for the dealer's salesmen. I suspect that he could find the

time if the distributor's salesman would teach his salesmen how to better sharpen their pencils."

"Mr. Dealer won't go along on a sales contest ever if it might cost him something and rarely even for free. He says it won't work."

SAYS HE CAN'T GET SALESMEN

"Mr. Dealer has no outside salesmen. He says he can't get them. Where do the vacuum cleaner companies and the storm sash outfits get them?"

"Mr. Dealer voices his complaints about everyone and everything in general in front of his men and expects them to think that he and his products should be sold with pride. Mr. Dealer should realize that his employees, sales and service, reflect his attitude and policies to the public."

"One of the differences between a good dealer and the average dealer is that a successful, legitimate dealer recognizes that the distributor's salesman has other things to do than stand in a store waiting to talk to him. The good dealer does not waste his own or the salesmen's time."

"It is the exceptional dealer who uses the facilities of the distributor as he should. The distributor maintains an advertising department which is glad to help the dealers. We have a statistical department at your disposal. Both of these departments could be of great value to the dealer if he would use them."

Answering his question, "What can we do about it?" O'Sullivan suggested that successful dealers hold meetings in their areas and explain NARDA's costs-of-doing-business studies (published in the NEWS).

"It will help the average dealer to operate more efficiently and at the same time realize that retailing involves basic costs that cannot be

eliminated outside of bankruptcy," he said.

He further suggested: "Help your competition. It will give you a warm feeling inside to be helping your fellow man and in the long run it will put money in your pockets—you'll be able to stop washing your own Cadillacs."

Newlyweds Offered Honeymoon Trip by N. Y. Appliance Dealer

JAMESTOWN, N. Y.—Caprino's Appliances here went after business from June newlyweds by offering to pay honeymoon transportation to New York City and hotel bill for three days to couples buying their appliances from the store.

Caprino's required that the couples buy a minimum of three major appliances to qualify for the free honeymoon trip.

The store promoted the deal with a newspaper ad captioned, "Getting Married?", and showing a bridegroom carrying his bride across the threshold.

The transportation offer was good to any spot within 400 miles of Jamestown.

Dealer Plays Santa, Gives Free Range Installation

SCRANTON, Pa.—Mackinder's appliance stores here promoted electric range business in June with a newspaper advertisement that featured a sketch of Santa Claus and the caption: "It Isn't Christmas. But J. L. Mackinder's stores are giving free complete installation with the purchase of a new electric range."

'Catch 'Em Young and Train 'Em' Is One Way To Get Good Salesmen

ALBANY, N. Y.—"The best salesmen as well as the best baseball players are developed while they are young," says Philip E. Richardson, manager of marketing of A. Wayne Merriam, Inc., General Electric major appliance distributor here.

With an ear to the future, he heard that in the junior class of Bethlehem High School in nearby Delmar were seven boys who thought they would like to be salesmen. He heard, too, that none of them knew how to go about getting started on a sales career.

To give them a close look at an actual sales operation, he made them his guests for a day at the Merriam distributorship. Sales practices, warehousing operations, inventory control, and office procedures were not only discussed but were made the subjects of firsthand demonstrations.

One boy even assumed the honorary post of president (for a day) of the distributorship. Other firm members answered questions on such topics as educational requirements, advancement opportunities, and job security.

"The main object," Richardson stated, "was to put across the idea of selling as an honorable and well-paid profession. But if some of these boys should decide that our firm is a good place to work," he adds, "it won't displease me a bit."

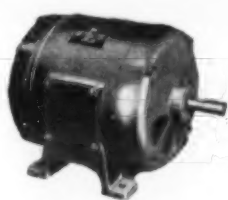
Richardson would not say whether he had followed the practice of major league baseball clubs and signed up any "bonus babies."

reliability makes **Delco Motors**
FIRST CHOICE!

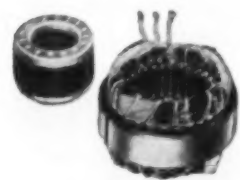
If you want a really dependable motor... a motor famous for year-in, year-out service... insist on a Delco! Specify Delco motors for all of your air conditioning and refrigeration equipment. These rugged, reliable power plants satisfy the most exacting requirements in any installation. For complete information regarding Delco motors, write Delco Products, Dayton, Ohio, or contact our nearest sales office.



THE BEST RUNNING MATE YOUR PRODUCT CAN HAVE!



Delco Integral HP Motors. Single-phase, repulsion-start, 1 through 5 hp. Polyphase, 1 through 100 hp.



Delco Hermatic Motors. Split-phase, capacitor-start, capacitor-start-and-run. Also polyphase. 1/2-15 hp.



Delco Condenser Cooling Fan Motors. 1/250 through 1/80 hp.

Delco Single-phase, Fractional HP Motors. Capacitor-start for blowers and open-type compressors. 1/8 through 1/2 hp. Repulsion-start, 1/2 through 1/4 hp.



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MANUFACTURERS OF THE FAMOUS VICTOR QUICKFREEZERS



Service & Supplies



PAUL LAUTERBORN, service-conscious Champaign, Ill. dealer, believes in having parts out where he can see them. This will give you some idea of how he "makes inches pay." Every wall is covered with bins of parts. Note racks suspended from the ceiling. Bins beneath bench roll out on casters and store more parts. And this is only a small fraction of Lauterborn's total parts inventory.

Huge Parts Stock Backs Up Dealer's Theory—

To Give Good Service You Have To Have Right Parts—It's the Backbone of Business

CHAMPAIGN, Ill.—The greatest concentration of appliance parts in the smallest amount of space under one roof.

That's the claim made by Paul Lauterborn for his appliance store here. And anyone who wants to dispute that claim is going to have a rough time on his hands.

Lauterborn is a man who believes "in making inches pay." If there is a square inch in his store that isn't carrying its share, Lauterborn doesn't know about it. The picture accompanying this article will give you a slight idea of what he means.

Lauterborn considers the backbone of the appliance business to be service. And to give service, the appliance dealer must have parts. Lauterborn has parts.

PARTS LINE WALLS FROM FLOOR TO CEILING

He has both side walls of his store covered with parts from floor to ceiling. These are hidden from customer view by a false wall set about two feet in from the actual wall. And on the back of the false wall are more

parts—from floor to ceiling and from front to back.

At the back of the display floor is a parts counter. Behind the parts counter are two rows of floor-to-ceiling racks. On these are glass jars packed with more small parts.

Behind this is the repair shop. Along the inner wall is the work bench, crowded with factory tools and testing equipment — Lauterborn insists on having the proper tools to do the job. Below the bench are a row of deep bins, mounted on casters so they can be slipped out easily and quickly. Above the bench are more rows of jars and boxes.

The other three walls are covered with bins. From the ceiling are suspended rows of racks, all filled with more parts.

Along the rear wall stands an upright oil tank. Until a few weeks ago, that tank just represented waste space to Lauterborn. Then he boarded it in, screwed hangers into the boards, and now stores his supply of hinges and latches there.

Down in the basement is a brand new TV repair room, where Lauterborn is now accumulating parts and testing equipment for TV service. Champaign doesn't have television as yet, but it expects a station to begin broadcasting soon. Lauterborn is going to be prepared.

Parts line the stairway leading to Lauterborn's office over the repair counter. And parts line the walls of the office. No matter where she looks, his office girl finds herself staring at parts that will repair anything from a lawn mower to a coffee pot.

\$100,000 SERVICE BUSINESS A YEAR

Lauterborn won't tell how much money he has invested in parts or what his inventory is worth. But he did say that he does more than \$100,000 worth of service business a year and handles about 6,000 repair jobs in the same length of time. He also declared that his entire inventory is paid for, "because you can't buy parts on time."

His stock runs the whole gamut of appliances and household devices. He has replacement parts for everything from an electric shaver to an electric range, and it doesn't matter what brand, how old it is, or whether the manufacturer is still in business.

"You may not need the part for five or 10 years," Lauterborn figures, "but you've got to buy a supply when the appliance is new in order to have it on hand when the customer needs it."

So, Lauterborn says, when he makes money on his appliance sales,

he doesn't put it in the bank. He invests it in parts—the best investment a dealer can make.

Why this great passion for parts? This is how Lauterborn sees it: 1954 is going to be the year of survival for the independent appliance dealer. If he thinks he has seen rough competition so far, it is nothing to what he is going to see next year.

"He who will be able to render the greatest amount of service at the lowest cost is the one who will survive," Lauterborn said. "The big boys aren't going to show any mercy. And they are going to be out to get all the business they can."

Lauterborn has already gained a reputation throughout this east central Illinois area for good and speedy service. He will repair any electric shaver in one hour. He gives same day service on all small appliances.

"We've got the parts, we know where to find them, and we know what to do," Lauterborn declared. "That's all it takes."

He also points out that such emphasis on service also leads to profitable appliance sales.

"Even if only one in 10 persons who give us service business comes back to purchase an appliance, that's more than 600 sales a year. And that's not bad," Lauterborn says.

But can the average appliance dealer afford to invest so heavily in parts and service?

Lauterborn smiled. "Just look in yesterday's paper. Read the appliance ads. What do they say? 10% off, 20% off, and even 50% off. That's how they are trying to sell merchandise. My ad says we give one day service on small appliances.

"What does it mean when they

have to advertise cut prices to sell? It means they either don't know how to get full profit on their merchandise or they need money to pay their bills.

"When we sell our appliances we get full price for them. The customer knows that we will give good service for as long as he needs it. He has confidence in us."

"I've got the parts, the tools, and the know-how to give good service. My business is in a liquid condition. I am now in the process of completely remodeling my store to make it even more efficient."

"By 1954, I will have the ammunition. I will have the guns. I'll be ready to start shooting. I believe I will be in the strongest position of any dealer in town to survive."

F. D. Lowell To Head Sales For Rochester Products

ROCHESTER, N. Y.—F. D. Lowell has been named sales manager of Rochester Products Div. of General Motors, reports H. W. Brandt, the divisions' general manager.



F. D. Lowell

Rochester Products produces GM steel tubing and a variety of component and accessory items. Lowell was formerly service manager of the division, and had joined Rochester Products in 1945 when he left the U. S. Army Air Force with the rank of captain.

Bush Names Victor Smith Production Manager

WEST HARTFORD, Conn.—Bush Mfg. Co., manufacturer of air conditioning, refrigeration, and heating products, has announced the appointment of Victor W. Smith as production manager.



Victor W. Smith

From 1945 until joining Bush Mfg., Smith was chief engineer with C. V. Hill Co., Trenton, N. J., maker of refrigeration fixtures, and display cases.

He has held engineering and production positions with other leading companies in the refrigeration and air conditioning field, including Frigidaire Div. of General Motors, York Corp., Sunbeam Electric, Redmond Motors, and Peerless Coll.

He served with the Army Ordnance Department from 1940 to 1945.

McIntire Appoints Chicago, Seattle Representatives

LIVINGSTON, N. J.—The McIntire Co., manufacturer of "DFN" driers, filters, and strainers, has announced the appointment of I. H. Cohler Co., Chicago, to cover Illinois, Wisconsin, Minnesota, Iowa, and St. Louis; and Mason Emanuels Co., Seattle, Wash., to cover Oregon, Washington, and British Columbia.

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ANY APPLICATION

A-P liquid charge makes the 209 a universal valve. Ideal for low temperature, commercial or air conditioning uses.

ANY PRESSURE LIMIT

0 to 55 lbs. Simply turn adjusting knob to pressure recommended by compressor manufacturer for overload protection.

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Quick and easy adjustment. Any setting from 0° to 20° F... closest control at all temperatures.

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Functions perfectly in any position — upside down... any angle... even where valve is installed lower than bulb.

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A-P liquid charge allows mounting valve and capillary in any ambient temperature... with perfect control assured.

The Model 209 is the most versatile expansion valve ever offered to the trade. It will take care of any type of application — low, medium or high temperatures, any superheat and any pressure limit. Just think what this adaptability means to you. No wonder alert jobbers all over the nation stock and recommend A-P valves.

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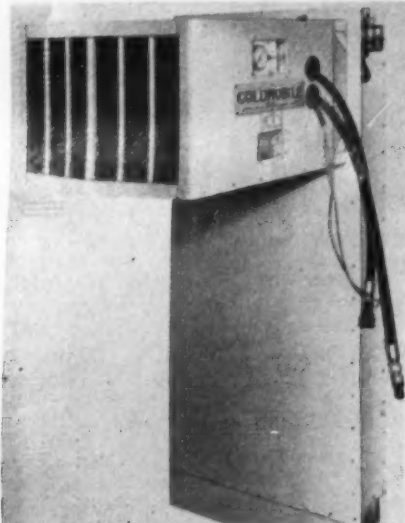


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Newark, New Jersey

What's New

When requesting further information on new products, please use "Information Center" form.

Complete Truck Refrigeration Unit In a 'Package'



—KEY NO. C-720—

CHICAGO—A new "Coldmobile" truck refrigeration unit which combines hold-over plates and a compressor driven off the truck engine has been introduced by Dromgold & Glenn Division, Union Asbestos & Rubber Co. here.

Designated as Model LE-HP, the unit features a package containing the condenser, evaporator plates, and stand-by system which mounts

through an opening in the upper forward wall of the truck body, explains Henry O. Kirkpatrick of the company.

Also available is a "split" model comprised of four separate units: a truck engine-driven compressor, static condenser, stand-by unit, and a hold-over plate bank. This is for trucks of insufficient height to permit over-cab mounting of the standard unit.

Both are designed for holding pre-cooled cargoes in the 35° to 45° F. range in truck bodies up to 18 ft. long having 3 in. or more of insulation.

The hold-over plate evaporator bank provides more than 4 hours of refrigeration when completely frozen and also acts as a "flywheel" to supplement cooling effect of engine-driven compressor, the company says.

Stand-by cooling system consists of a separate 2-cylinder compressor driven by a ¾-hp. motor.

Condenser-evaporator fans are powered by the truck generator during over-the-road operation of the truck. They are wired to the truck voltage regulator, however, to stop automatically when the engine slows to idling speed. During stand-by operation, these fans are powered through a transformer-rectifier. Automatic control is provided.

American Radiator Shows Commercial Conditioner

—KEY NO. C-721—

PITTSBURGH—A new packaged summer air conditioner for commercial establishments has been placed on the market by American Radiator & Standard Sanitary Corp.

The latest addition to the American - Standard "Mayfair" line of air conditioning equipment, the new product is manufactured in two models, CCA-2 and CCA-3, of 2 and 3-hp., respectively.

Cooling capacity for the 2-hp. model is 24,000 B.t.u. per hour; for the 3-hp. model, it has a capacity of 36,000 B.t.u. per hour.

Winter heating can be provided by the addition of a heating coil. This coil, located inside the Mayfair, utilizes steam or hot water from an American-Standard boiler or an existing source.

According to the company, the Mayfair is "extremely compact." Either model can fit into the same small 22-in. by 25-in. floor space, it was stated.

The cabinet is constructed of heavy gauge steel, Bonderized for durability and finished in a semi-gloss, baked-on enamel.

The hermetically-sealed refrigeration circuit in each unit is internally spring-mounted. It consists of a gas-cooled compressor and a counter flow condenser with removable header plates for easy cleaning. A high pressure cutout offers protection against abnormal condensing pressures, according to the firm.

Controls include an adjustable thermostat and a three-way switch so the fan may be operated alone when cooling is not needed. A "Humid Weather" control permits removal of excessive moisture from the air on hot muggy days "without the unpleasant effects of overcooling," the company said.

Conditioned air is supplied by a centrifugal-type fan. Air direction and flow is controlled by a 4-way adjustable grille in the plenum section on top of the unit. When the unit is located outside the conditioned area, the plenum section is removed so a direct connection can be made between the fan and ductwork, the manufacturer stated.

A return air grille of fixed deflection is located in the front of the unit. A cleanable-type air filter is employed.

Pre-assembled at the factory, the Mayfair is ready for operation as soon as required electric, water, and drain connections are made.

In addition to the heating coil for winter operation, other accessories include side supply grilles for the plenum chamber and a return air filter frame to provide a duct connection on the return air side of the unit.

Dryomatic Dehumidifier Uses Adsorption Principle



—KEY NO. C-722—

ALEXANDRIA, Va.—An "adsorption type" dehumidifier for home use was introduced recently by the Dryomatic Corp. here.

The company is making two models: a standard model 21 priced at \$149.95 and a deluxe model 21H which includes an additional indicator panel and a humidistat to regulate room humidity at any predetermined level. The model 21H is priced at \$179.95.

Both models are finished in two-

tone colors—either a neutral beige trimmed in cocoa brown or a sea green with darker forest green trim. Both measure 20½ in. high by 15½ in. wide, by 13 in. deep.

The company says the units will plug into any standard home current supply. It claims they will lower humidities down to 20% where desired.

Anthony Hass, vice president and sales manager of Dryomatic, explained that the adsorption type dehumidifier operates on the principle that certain chemicals have an affinity for moisture particles in the air. In the Dryomatic, air is passed through a bed of special drying agents which adsorb the moisture.

The air is then returned to the room dry and dust-free. After the drying agent becomes saturated, it is electrically and automatically reactivated, and the adsorbed moisture is expelled to the outside in the form of water vapor.

There is no liquid water deposited during the process, Hass said, nor are there any chemicals to replace.

In addition, Hass noted, Dryomatic units retain their efficiency at low temperatures so that they can reduce relative humidity levels down to 20% even at low temperatures. Only moving part in the unit is a small fan.

Hoover Washer Has 6-Lb. Capacity, Work-Table Top



—KEY NO. C-723—

NORTH CANTON, Ohio—A new washing machine, designed primarily for small homes and apartments, has been developed by the Hoover Co., maker of electric cleaners and other electric appliances.

Styled by Henry Dreyfuss, industrial designer, the new Hoover washer is marked by its small size and compactness. A folding wringer allows for a flat top, so when not in use it can serve as a utility table in

the kitchen, bathroom, dinette, or hallway. It has an exceptionally neat appearance and can be easily stored.

It will wash six pounds of clothes in four minutes. It moves easily on large casters, so the homemaker can do her laundering chores in any part of her home where convenient.

The anodized aluminum tub has a rounded bottom for easier cleaning. The cover serves as a tray to catch laundry after wringing. The water action is provided by a pulsator. With the pulsator located in the side of the tub the entire tub is left free for the movement of the clothing. Movement of water washes the clothes, not the pulsator itself.

The washer is slightly over 30 in. high and the top dimensions are 16½ by 17½. It is finished in baked white enamel, with cover finished in natural aluminum. The electric cord is 10 ft. long. The washer is available for either a.c. or d.c. current.

The wringer, which folds inside the washer when not in use, also is finished in baked white enamel. The water filling and emptying hose is about 40 inches long.

An automatic pump, incorporated in the machine, makes for easy emptying of the water through the same tube used to fill the tub.

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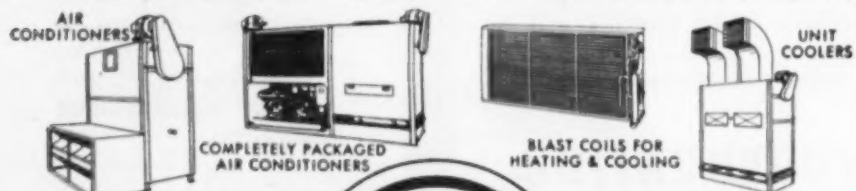
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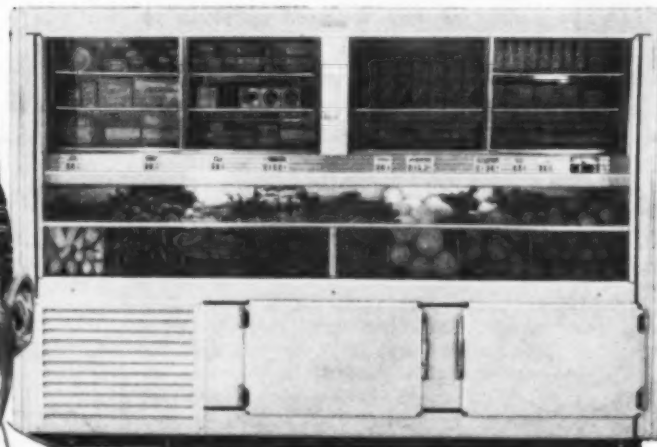
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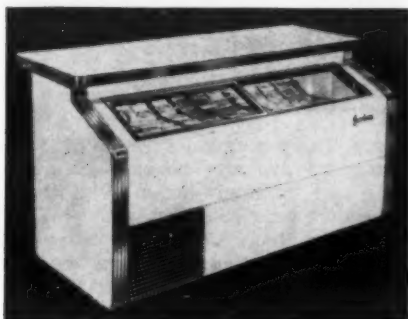
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What's New (Cont.)

Jordon Frozen Foods Case Has Counter Top



KEY NO. C-724

PHILADELPHIA — The Jordon "Angle-Vue" freezer, new frozen food merchandiser with formica counter top that doubles as an extra display unit, check-out or wrap counter, is now being marketed by Jordon Refrigerator Co. for food stores.

The new freezer (model AV-75) "offers a complete frozen food department for even the smallest store without sacrificing valuable floor or counter space," Jordon said. "It is designed also for supermarket use for tie-in displays of related items

in bakery, dairy, fresh meat, and pet food departments. It carries a two-year frozen food spoilage insurance policy."

The freezer is designed to be used as an island display in the center of the store, as a check-out counter, or in wall areas where the formica top adds extra display space.

The interior is illuminated by fluorescent lighting. It has a capacity of 16.4 cu. ft. or storage space for about 560 standard packages of frozen foods. Jordon "Wrap Around" refrigeration "provides a blanket of zero-cold around all walls and floors," according to the company.

The freezer comes with a full-length reflecting mirror and heavy clear-vision sliding glass doors. The formica top measures 24 in. deep and 78 in. long, with edges trimmed in highly polished aluminum.

Over-all dimensions of the Angle-Vue are 39 1/4 in. high, 75 in. in width, and 29 1/4 in. deep. Exterior finish is white "Hi-Baked" Jordon "Auto-Body" finish in high-polished aluminum trim. Interior has baked-on enamel "Auto-Body" finish.

'Edco' Window Cooler Features Electric Heater

KEY NO. C-725

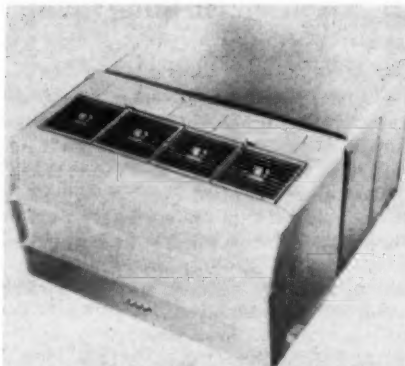
DETROIT — National distribution of its new "Edco" 3/4-hp. window air conditioner is planned by A. V. Cauhorn Co., air conditioning contractor and wholesale distributor here.

Claimed to be capable of cooling rooms in sizes up to 475 sq. ft., the unit is supplied with a 1,500-watt electric heater intended for "cool spring and fall days and nights when the regular heating system is not operating."

Room air intake is located directly in the front of the unit. Air is discharged through the top of the unit through four adjustable louvers.

Also on the top of the unit are the concealed controls and exhaust door. Refrigerating system uses a "Freon-12" Tecumseh hermetic unit.

Front of the cabinet is a modified polystyrene plastic. Balance of the



cabinet inside the room of 20 gauge cold rolled steel, while exterior cabinet is of 20 gauge vitreous enameling stock.

Width of the unit is 26 1/2 in., depth, 30 in., height, 16 in. It projects into the room 14 in. and weighs 200 lbs.

Bally Wall-Type Cooler Uses Little Floor Space



KEY NO. C-726

BALLY, Pa. — A new wall-type dairy and beverage cooler has been designed by the Bally Case and Cooler Co. to provide the maximum amount of display and storage space in a minimum area of floor space.

Primarily, the new wall-type cooler is designed for use wherever traffic is heavy, and constructed to maintain an attractive finish throughout its service lifetime. The interior and exterior are clad with acid-resistant porcelain said never to turn yellow or peel.

The cooler comes in three models—in 4-ft., 8-ft., and 12-ft. lengths. These three offer a display area of 24 sq. ft., 48 sq. ft., and 72 sq. ft., respectively. Their respective capacities are 33 cu. ft., 68 cu. ft., and 102 cu. ft. All three models are 31 in. deep and 81 in. high.

Each cooler is equipped with light

weight, free moving, sliding doors. They can be lifted out to convert the cooler into a self-service case during busy store hours. The smallest cooler has two top and two bottom sliding doors; the 8-ft. cooler has four of each, and the 12-ft. cooler six of each.

A 1/2-hp. noise-free compressor refrigerates the 4-ft. cooler and a 1/2-hp. unit powers the 8-ft. cooler. The 12-ft. cooler is refrigerated by a 1/2-hp. compressor for regular use, and by a 3/4-hp. compressor under conditions of heavy use.

Because of their 30-in. width, all three models will clear through narrow doorways with room to spare. Refrigeration starts as soon as the cooler is placed in position and plugged into an electrical outlet.

Hotpoint Adds 10.5-Cu. Ft. Freezer with Crowned Lid

KEY NO. C-727

CHICAGO — A new medium-priced 10.5 cu. ft. chest type food freezer, designed to meet the needs of medium income and medium size families, has been introduced by Hotpoint Co.

The freezer, EK-105-7, is highlighted by a new chrome plated combination handle-lock and crowned lid with rounded corners for easier cleaning.

Square plates on the new handles bear "H" medallions and click to one side when the user wants to unlock the freezer. Lids are counterbalanced on the new model for extra safety.

New handle-lock automatically latches the lid when a gentle pressure is exerted. The new model is said



to store 368 pounds of food.

Other convenience features of the new 10.5-cu. ft. model include hermetically-sealed freezing unit, an alarm signal that indicates a power interruption, a thermometer fitted to one of the wire storage baskets, a juice rack for frozen fruit juice cans, and an interior light that illuminates.

Storage baskets are provided as standard equipment. Vertical separators in the lower sections below the baskets facilitate loading.

Exterior styling of the new Hotpoint food freezer has been changed to simple, unbroken lines so that the unit can be easily matched with other appliances in the kitchen, laundry, or utility room. Flat, counter-high tops of the units provide convenient work surface when lids are closed.

Information Center

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HOW TO APPLY VALVES

By A-P Controls Corp., Milwaukee

This is another in the series of articles devoted to problems of application involved in various types of control valves used in refrigeration and air conditioning. The series is based on excerpts from the "Product Application Manual" prepared by A-P Controls Corp. and published with permission.

Thermostatic Expansion Valves (6)

2. PRESSURE LIMITING TYPE

Pressure limiting type valves are standard thermostatic expansion valves with the addition of a pressure limiting feature to provide motor overload protection at times of high heat load on refrigerating systems.

Present day condensing units are designed to operate in a certain range of suction pressures, and operation of the high-side equipment above the recommended maximum pressure imposes an overload on condensing units which may result in eventual damage to condensing unit motor. To prevent suction pressures from soaring during machine operation to heights above that for which the unit is designed, pressure limiting thermostatic expansion valves have been designed.

The valve will perform as a standard thermostatic expansion device when operating at suction pressures within the range for which the condensing unit is designed. When due to a high heat load the machine's maximum operating pressure is reached, the valve's pressure limiting feature takes the control of refrigerant flow from the power element and throttles the flow of refrigerant to the evaporator to prevent suction pressures from increasing beyond this predetermined point.

The machine will continue to operate at this maximum suction pressure until the overload condition has passed, at which time the suction pressure will drop below the maximum point, and the valve will again function as a standard thermostatic expansion device.

A-P CONTROLS PRESSURE LIMITING VALVES

Models 208 and 209 constitute A-P

Control's series of pressure limiting thermostatic expansion valves, valves available in 1/2, 1, and 1 1/2-ton refrigerating capacity. Excepting the pressure limiting feature, the Model 209 thermostatic expansion valve is similar to the standard type valves.

It is the addition of an adjustable pressure limit that distinguishes this valve, a pressure limit adjustable over the range of 0 lbs. to 55 lbs. gauge to provide a valve suitable for all applications whether required for low, medium, or high temperature operation.

SUPERHEAT ADJUSTMENT

Model 209 valves feature adjustable superheats as well as adjustable pressure limits. Superheat is factory set at 9° F., a setting suitable for the majority of refrigerating applications.

An important point to be remembered in making the Model 209 superheat adjustment is the fact that changing the superheat setting will affect the valve's pressure limit setting. It is therefore important to make any change in superheat setting before adjusting the pressure limit.

Allow the system to operate after the valve has been installed to determine definitely if a superheat adjustment is desirable. As mentioned, the majority of applications will not require a superheat adjustment.

To reset the valve's superheat, first, turn the pressure limit adjustment to a high setting (45 lbs.-55 lbs.) as indicated on the adjusting stem. Second, make the superheat adjustment, turning the adjusting stem in (clockwise) to increase the superheat setting. Be sure to replace the seal cap over the superheat adjusting stem when adjustment has been completed.

PRESSURE LIMIT ADJUSTMENT

After the Model 209 valve has been adjusted for proper superheat (if a setting other than the 9° factory

setting is required) the pressure limit adjustment can be made. The pressure limit adjusting stem is marked for the valve setting in the manner of a Model 204C automatic expansion valve. Simply turn the adjusting stem to the setting recommended by the condensing unit manufacturer and the adjustment is made.

If a highly accurate setting is required, overload the equipment by some means and install and read a low-side pressure gauge. Adjust the pressure limit (since the machine is operating overloaded) as you would adjust an automatic expansion valve. When the correct setting has been made, replace the cap over the adjusting stem and return the machine to normal operation.

OFF-CYCLE SUCTION PRESSURE INCREASE

Model 209 pressure limiting thermostatic expansion valves can only prevent suction pressure from rising above a predetermined point during the time of machine operation.

Suction pressure increase during the off-phase of the cycle generally proceeds until the start of the ensuing running phase. If suction pressure at the time of machine cut-in is above the valve's pressure limit setting, the valve will remain closed until suction pressure is reduced (by machine operation) to the valve setting.

While the machine will be overloaded to this point, the period of duration is extremely short as no refrigerant liquid is being fed to evaporator coil. The resulting quick reduction of suction pressure to the valve's pressure limit setting, and operation at or below this point during the balance of the running phase provides the overload protection required.

SELECTION OF AUTOMATIC SWITCH

Model 209 thermostatic expansion valves may be employed with either low-side pressure type (pressure-stat) or temperature type automatic switches. In those few cases where cut-in pressures may be above the pressure limit setting of the valves, no difficulty will be encountered with pressurestats as off-cycle suction pressures will rise above the pressure limit point. This pressure is quickly reduced to the pressure limit setting at the start of the running phase of the cycle, however, to provide motor overload protection.

(To Be Continued)

Recold Gets Patents on Triangular Delta Coil

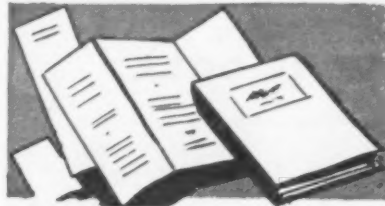
LOS ANGELES—Patents covering the manufacture of the Recold "Delta" coil have been granted by the United States Patent Office, according to Hy Jarvis, vice president and general manager of Refrigeration Engineering, Inc.

The design patent on the Delta was granted in February, 1952, and the patent covering the unit was granted under patent #2,633,713 dated April 7, 1953.

The Recold Delta coil is a triangular shaped unit that fits into the corner of a reach-in or walk-in refrigerator. It makes possible the utilizing of out-of-the-way corners for installation.

Emerson's Davenport Office Moves to AIC Building

DAVENPORT, Iowa—The Davenport office of the Emerson Electric Mfg. Co. has recently moved to the AIC building at 617 Brady St., the company announced recently.



Current LITERATURE available

To obtain further information on the literature listed below, please refer to key number preceding listing. Please use the "Information Center" form on "What's New" page.

Fiberglas Issues Booklet On Duct Insulation Design

—KEY NO. O-720—

TOLEDO—A new 16-page design data booklet for Fiberglas duct insulations has been issued by Owens-Corning Fiberglas Corp. here. It is available upon request.

The booklet has more than 40 photographs and drawings of the various rigid and flexible Fiberglas insulations for the exterior and interior of warm and cold air ducts.

Included is complete information about the new flexible duct liner, a product recently introduced by the company. This material may be installed on metal sheets before they are bent to form ducts. It is sprayed with a light coating of fire-safe neoprene to prevent erosion by high-velocity air and to reduce frictional losses.

Worthington Describes Use Of Vertical Turbine Pump

—KEY NO. O-721—

HARRISON, N. J.—The story of the Worthington vertical turbine pumps is presented in a new bulletin being offered by Worthington Corp.

The new bulletin, No. W-450-B41, offers suggestions for a variety of applications for the pump, including recirculation of cooling water and condensate return. Many of the applications are illustrated.

Selling Guide Describes All Hotpoint Appliances

—KEY NO. O-722—

CHICAGO—A new four purpose selling guide describing all Hotpoint appliances and listing the 10 most prominent features of each has been made available to the company's distributors and dealers.

According to D. D. Thompson, sales training manager, the booklet is a guide to a quick review of appliance sales features; reminder of selling points during demonstrations; hand-out piece for prospects to take home and a staffer to enclose with promotional mailings.

It fits inside the coat pocket and serves the salesmen as a full-line review.

Wiring Diagram Bulletin Shows Starter Applications

—KEY NO. O-723—

MILWAUKEE—A 24-page wiring diagram bulletin, describing the many ways that the Allen-Bradley Bulletin 709 magnetic across-the-line starter can be applied, is now being offered by the Allen-Bradley Co.

Each wiring system in this bulletin is shown in two ways. There is a "wiring diagram" and below it is a "line diagram."

The wiring diagrams include all the devices in the system and show their physical relation to each other. All poles, terminal, coils, etc., are shown in their proper place on each

device. These diagrams are helpful in wiring up systems because connections can be made exactly as they are shown on the diagrams.

The line diagram is a representation of the system, showing everything in the simplest way. All connections are made in such a manner that the functioning of the various devices can be most readily followed visually.

Wiring diagrams are shown for all sizes of starters; 1-, 2-, and 3-phase systems; jogging; two-wire control; pump operation; thermostat control; sequence control; and many others.

Airo Supply Adds Features To New Wholesale Catalog

—KEY NO. O-724—

CHICAGO—Airo Supply Co. here has just released a new wholesale catalog, "Airo Buyers' Guide No. 53."

New features of the catalog include a larger section devoted to replacement controls. This section is fully illustrated and contains complete data aimed at simplifying the selection of replacements.

Another major feature of the catalog is a series of relay charts appearing on the inside back cover. The charts display the correct wire terminal "hookup" for various type relays such as G-E, Klixon, and Delco.

A cover index listing 24 "everyday" items gives an immediate reference to the common "repeat" type merchandise and serves as a supplement to the master index.

New lines added to this year's catalog include Kelvinator condensing units, both open and hermetic, Us-Airo air conditioning units, and Reliance ammonia equipment. These are in addition to the complete line of Brunner units wholesaled by Airo.

Catalog requests should be made on a business letterhead or accompanied with proof of affiliation with the refrigeration or air conditioning industries, the company noted.

Koch Book Explains How Modern Sausages Are Made

—KEY NO. O-725—

KANSAS CITY, Mo.—How modern sausages and chopped meats are made is explained in a booklet published recently by Koch Supplies here.

Ray Miller, Koch advertising manager, said the 40-page book was written because existing books on the subject were getting more and more out of date as constant progress in the art of sausage making advanced. The book gives formulas that appeal to current American taste.

Catalog Covers Titus Perimeter Diffusers

—KEY NO. O-726—

WATERLOO, Iowa — Titus perimeter diffusers for both heating and cooling are described and illustrated in a new catalog recently published by Titus, Inc. here. The catalog also contains two full pages of engineering data and a discussion of new Titus grilles.



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Refrigeration Problems

and their solution

by Paul Reed

For Service and Installation Engineers



Paul Reed

Room Air Conditioners (2)

The National Electric Code allows a maximum loading of 1,500 watts on an ordinary 115-volt house lighting circuit using No. 14 wire and protected by a 15-ampere fuse.

It also allows 2,000 watts on an appliance circuit for the kitchen or dining room, using No. 12 wire and protected by a 20-ampere fuse.

A special 230-volt circuit can be run for pumps or other heavy loads, with the size of wire and the fusing governed by the load that it serves.

The number of permissible circuits is limited by the size of the entrance wiring, switch, and fuse block.

MOTOR WATTAGES TO BE EXPECTED

Theoretically, one horsepower is 746 watts, but if the motor is about 65% or 70% efficient (about normal for fractional horsepower, single phase motors), a one horsepower motor would draw about 1,100 watts ($746 \div 68\%$), $\frac{1}{2}$ hp. about 550 watts, etc.

Fractional, single-phase motors used on refrigeration condensing units are built to carry 40% overload continuously, and the refrigeration standard permits this loading.

Therefore, a 1-hp. refrigeration

motor may normally draw about 1,540 watts, a $\frac{3}{4}$ -hp. about 1,160 watts, and a $\frac{1}{2}$ -hp. about 770 watts. These are approximately the normal wattage consumption of the motors driving the compressors of room air conditioners.

These wattages do not include the two fan motors, which will add about 200 to 250 watts. Thus, the normal total wattages that may be expected of room air conditioners are about 1,700 for 1 hp., 1,400 for $\frac{3}{4}$ hp., and 1,000 for $\frac{1}{2}$ hp.

The above wattages may be considered as about the maximum that can be expected while the conditioner is running. Locked rotor wattages (wattages at the instant the motor starts) will probably be about $3\frac{1}{2}$ to 4 times the above wattages, but dropping down to running wattages within a few seconds after the motor starts.

TABLE I

HP	Wattage	Locked Rotor Amps.	
		115 volts	230 volts
$\frac{1}{8}$	600 to 680	22 to 26	
$\frac{1}{4}$	850 to 960	35 to 46	
$\frac{3}{8}$	1130 to 1350	46 to 63	24 to 32
$\frac{1}{2}$	1500 to 1680		27 to 33

Typical average wattages and locked rotor amperes of window units on the market today.

These wattages are cited for general guidance, and may vary according to the make of the room cooler and according to operating conditions. For example: a $\frac{3}{4}$ -hp. window unit that draws only about 1,000 watts with 70° outside air may draw 1,500 watts with the outside temperatures above 100°.

Selection of wire sizes and fusing should be governed by the manufacturer's data, and by local ordinances and codes that may apply.

The electrical circuits of houses wired 25 or more years ago are usually overloaded now. The newer houses built within the past few years are in somewhat better condition, but most of them are just about loaded.

When a contractor builds a house, he puts in enough circuits to carry the lights and appliances that the average home may be expected to have, with some provision for more lights and appliances than average.

But it is certainly rare for him to put in an almost unloaded circuit which is what is required for a $\frac{3}{4}$ -hp. room conditioner. In fact, a $\frac{3}{4}$ -hp. does well to stay within the 1,500 watts permitted on a circuit using number fourteen wire. Even a $\frac{1}{2}$ -hp. unit leaves only about 500 watts for other appliances on such a circuit.

HOW TO CHECK THE CIRCUIT FOR SPARE CAPACITY

Then how is the installer to know whether the wiring is able to carry the window unit? Must he install it and then find that the circuit is overloaded and a new line must be run in? This costs some money and there is often quite an argument as to who is going to pay for it.

It is a wise precaution to check beforehand whether or not the cir-

cuit has enough spare capacity for the conditioner plus the load it already has. If he had a wiring layout of the house, the installer could locate the various lights and appliances on that circuit and add up the wattages. Usually he has no means of telling just what loads the circuit is already carrying.

A quicker and more accurate method is to use a tester having a resistance that draws about the same wattage as the room conditioner. It is plugged into the circuit to which the unit is to be connected, with the lights and appliances normally in use in the house or office turned on.

A wattmeter should be connected in with the tester so that with the circuit carrying its normal appliances, lights, and the tester resistance that draws a wattage load equal to the room cooler, the total wattage can be read. If it is over 1,500 watts, it is more than is permitted under the National Electric Code for 115-volt circuits using No. 14 wire. If it is over 2,000 watts, it is too much for a 115-volt circuit using No. 12 wire.

Also, the resistance can be turned off and on to see if the fuse (15 amp. for No. 14 and 20 amp. for No. 12 circuits) will stand it. Even this is

not an adequate test, for a motor draws considerably more current to start than a resistance does, so the fuse may hold for the resistance, but not for the conditioner. However, this may be overcome by using a delayed action type of fuse such as the Fusetron.

A voltmeter should also be included with the resistance tester and the wattmeter, so that with all the load on the circuit, the voltage can be read. Preferably, of course, the voltage should stay up to the nameplate rating of the conditioner.

However, the motors on the conditioners will start and come up to speed if the voltage during the start does not drop below 90% of rated voltage. After the motor starts, the voltage should recover and get back up to about rated voltage.

MAKE BOTH TESTS

Both the wattage and voltage tests should be made. The wattmeter may show that the circuit is within limits, but the voltage may still be too low. This could be the result of low voltage at the meter, which might in turn be due to too small entrance wire or low voltage on the utility's secondaries.

The resistance tester may be purchased already made, or it can be constructed by the service engineer from any suitable resistances from toasters, irons, etc. One-hundred watt lamps can be used, but they are bulky. Preferably, it should have taps taken off for 100 watt steps as shown in Fig. 1.

If a new line must be run in, it is helpful if it is a 230-volt line, for the voltage drop is much less than for 115 volts. In fact, the trend is toward the use of 230 volts only for units above $\frac{1}{2}$ hp.

Room coolers are termed "plug-

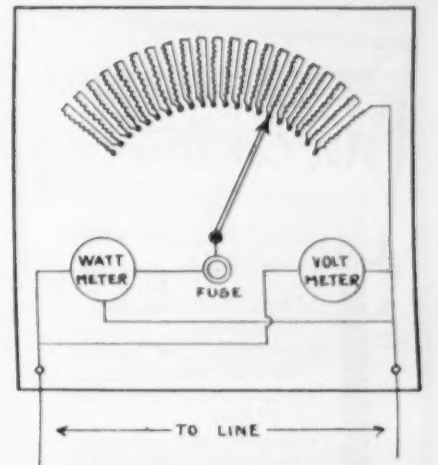


FIG. 1—Electrical circuit load tester—2,100-watt, adjustable in 100-watt steps.

in" units, but preferably they should be wired in permanently rather than using a connection cord.

It is the writer's opinion that the frames of room coolers, especially window units, should be grounded. If the wiring is the permanent type, the frame can be grounded to the neutral wire.

If a connection cord is used, it should be the three wire type with the ground wire connected to a permanent ground or to the neutral. Connection cords for $\frac{1}{2}$ -hp. units and larger should always be of not less than number fourteen, stranded wire.

FOLLOW YOUR LOCAL CODE

The permissible wattages, and wire and fuse sizes referred to in this discussion are according to the National Electric Code. Your local code may be more restrictive, and therefore should be consulted and followed.

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Air-Cooled Condensers—1

Data Covering Design, Application, Selection
Of Kramer Trenton 'Unicon' Outlined by Segal

Editor's Note: Over the past several months S. Charles Segal, general sales manager of Kramer Trenton Co., has presented talks before various ASRE sections and local and national RSES groups discussing the air-cooled condenser which his company is marketing under the trade name "Unicon." The following is Part 1 of a detailed report of the talk given at a Detroit ASRE meeting.

DETROIT—"In recent years the nation was shocked into the realization that water supplies and sewage systems were very much limited," declared S. Charles Segal, general sales manager of Kramer Trenton Co., in a talk on air-cooled condensers before the Detroit ASRE section.

"The refrigeration industry has long accepted without reservation the air-cooled condenser in a domestic refrigerator and freezer, in vehicle refrigeration and air conditioning, and in window air conditioners. Why, then, has the refrigeration industry been so slow in adapting the air-cooled condenser for other and larger systems?

REASONS FOR HESITANCY CITED

"The reason for this hesitancy is due to the use of the wrong yardstick in judging it. The industry's experience has been limited to the old, chassis-mounted, air-cooled condenser. In order to understand the reason for the 'mental block' against the chassis-mounted, air-cooled condenser, let us examine some of its shortcomings," Segal suggested.

"Because the air-cooled condenser in the past has been mounted on the chassis of a condensing unit, it was naturally limited in physical size to the dimensions of the compressor chassis. This dimensional limitation made air-cooled condensers larger than 3 hp. impractical.

"With the condenser fan mounted on the motor pulley and at one end of the condenser, it was difficult to get good air distribution through the old chassis-mounted condenser. Often half of the condenser was doing very little or no work at all.

"It takes power to drive the condenser fan. In the old chassis-mounted condenser this power must

be taken from the compressor motor, thus reducing the amount of power available to drive the compressor. The compressor speed had to be correspondingly reduced to prevent motor overloading. This resulted in reduced refrigeration capacity for the old air-cooled condensing units," he explained.

"Since the fan was directly connected to the compressor motor, it operated at very high speed (1,750 r.p.m.). This resulted in an objectionable noise level, especially with a 2 or a 3-hp. unit.

"Very frequently it was necessary to install the compressor in the most cramped, unventilated, and dirty location. This subjected the chassis-mounted, air-cooled condenser to the worst disadvantage.

"Since most of the condensing units are mounted on the floor, the air required for the condenser constantly sweeps the floor and quickly clogs the chassis-mounted condenser.

"Due to the competitive design of the condensing unit, the refrigeration industry has become used to high head pressures with the chassis-mounted, air-cooled condenser. Ratings for these units are still based on 90° entering air and 120° condensing temperature (30° TD.). Under actual operating conditions frequently much higher condensing temperatures are encountered," Segal declared.

LITTLE RESEARCH HAS BEEN CONDUCTED ON AIR-COOLED CONDENSERS

"Over the years there has been constant research on all phases of the refrigeration system excepting air-cooled condensers. Numerous papers have been published on all components of the refrigeration system, but literally nothing has been written on air-cooled condensers. The air-cooled condenser has been the orphan of the industry.

"The Kramer Trenton Co. has been pioneering the remote type air-cooled unit condenser under the trade name, 'Unicon,' for 15 years. During this time continual research was maintained both in the laboratory and in the field. Careful checks were made on a large number of designs, constructions, and applications which resulted in continual improvements.

"During this period the Kramer staff has accumulated a vast amount of unique knowledge, experience, and know-how in the design and application of air-cooled condensers, and the following is a partial summary of this study.

FAULTS ELIMINATED BY REMOVING CONDENSER FROM COMPRESSOR CHASSIS

"Many of the objections to the conventional air-cooled compressor resulted from the condenser being mounted on the compressor chassis. By adding an independent fan and motor to the air-cooled condenser the condenser was unchained from the compressor chassis and it was possible to install it away from the compressor in a remote position. It became a unit condenser, or Unicon. This single fact made possible significant results.

FIG. 1 shows a typical installation of direct driven "Unicon" air-cooled condensers.



ble to install it away from the compressor in a remote position. It became a unit condenser, or Unicon. This single fact made possible significant results.

"Since it has its own fan and motor, it is not necessary to rob the power from the compressor motor. Now all its power can go into driving the compressor. The compressor can, therefore, run at the same speed as with a wet condenser, resulting in significant increase in B.t.u. capacity," explained Segal.

WIDE RANGE OF SIZES

"Once the air-cooled condenser was unchained from the compressor base it was no longer limited to the chassis size. Since the Unicon offers a wide range of sizes, between ¼ and 40 hp., or any multiples, selections can be made for low head pressure for any size system.

"The Unicon is available in two designs: (a) with direct fan drives (RC models), and (b) belt-driven (BD models).

"The direct drive units (see Fig. 1) cover a range of ¼ to 10 hp. with fans rotating at a maximum speed of 1,140 r.p.m. The fans were selected for extra quietness so that the overall noise level of the RC units has been found to be entirely acceptable.

"For extra low noise level, the BD models (Fig. 2) should be selected. These cover a range of capacities from 3 to 40 hp., or any multiple.

"The remote location of the unit permits it to be installed where the air is free from dirt and other foreign material which would clog the condensing coil. When a floor stand is used, the unit is raised off the floor a sufficient distance to prevent the fan from sweeping the floor.

"The rating of air-cooled condensers has never been standardized by the refrigeration industry because it had traditionally been considered an integral part of a compressor. Because the Unicon is sold independent of the compressor, Kramer has taken special pains to test and rate each unit under actual operating conditions.

"A condenser must dissipate both the heat from the evaporator and the heat of compression. For a given tonnage and head pressure, the heat of compression varies with the back pressure; the lower the back pressure, the greater will be the heat of compression.

"The rate of heat flow to the condenser is governed by the compressor capacity plus the heat of compression. Therefore, the Unicon must be selected to balance the capacity of the compressor. To simplify selection, Table 1 lists only the refrigerating effect produced by the compressor.

"Correction factors covering heat of compression for evaporating temperatures below 40° are listed in Table 2.

"The capacity of the unit itself is directly proportional to the temperature difference between the entering air (dry bulb) and the condensing temperature.

EXAMPLE NO. 1

"In a given system the Unicon operates at 85° entering dry bulb and 105° condensing temperature (20° T.D.). Should the entering air temperature increase from 85° to 90°, the condensing temperature also would increase by 5°, from 105° to 110°, maintaining the temperature

(Continued on next page)

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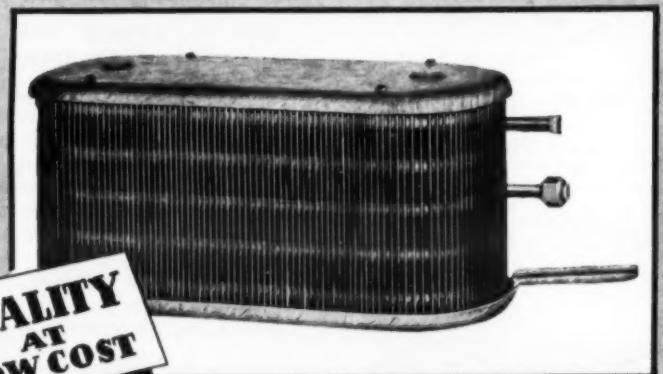
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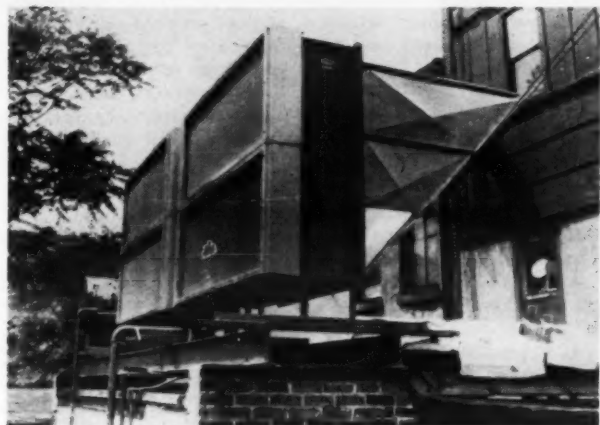


FIG. 2—Belt-driven air-cooled condensers mounted on roof of restaurant. Note how units are stacked one above the other.

Data on Air-Cooled Condensers--

(Continued from preceding page)
difference of 20° constant so long as the heat load at the evaporator is the same.

EXAMPLE NO. 2

"If a given Unicon had a capacity of 10 tons at 20° temperature difference between entering dry-bulb temperature and condensing temperature, the same unit would have a capacity of 15 tons if its temperature difference would increase to 30°, (assuming the same evaporating temperature).

"All listings in Table 1 are based on 90° air temperature, 120° condensing temperature, and 40° evaporating temperature. For actual design conditions multiply ratings in Basic Table 1 by the correction factors for variation in evaporating temperatures (Table 2) and for variation in entering air and condensing temperatures (Table 3)," Segal explained.

"Table 2 gives the necessary factors to be applied to ratings in Basic Table 1 for evaporating temperatures

lower than 40°. This automatically accounts for the variation in the heat of compression.

"Table 3 lists correction factors for entering dry-bulb conditions and condensing temperatures other than in Basic Table 1.

"The use of these three basic tables is illustrated in the following example using basic rating Tables 1, 2, and 3:

"Required: To select a Unicon for a compressor having a capacity of 95,000 B.t.u./hr., +20° suction, 115° condensing temperature, and 90° design entering air temperature.

"Solution: From Table 2 the correction factor for +20° suction is found to be 0.95.

"From Table 3 the correction factor for 90° entering air and 115° condensing temperature is found to be 0.834.

"Required capacity of the Unicon under basic conditions:

$$\text{B.t.u.} = \frac{95,000}{0.834 \times 0.95} = 120,000 \text{ B.t.u./hr.}$$

Table 1—Basic Rating at 40° Suction, 90° Entering Air

Model No.	Compr. Capacity-B.t.u./hr. 120° Condensing Temp.	Fan Dia. Inches	Fan Speed R.P.M.	Motor Hp.
RC75	0.88	10600	1125	14
RC100	1.11	13340	1450	16
RC150	1.61	19300	2450	18
RC200	2.36	28300	2850	20
RC300	3.18	38200	3400	20
BD300	3.31	39800	3450	24
RC500	5.14	61700	5500	20
BD500	5.13	61600	5500	30
RC750	7.92	95000	6900	24
BD750	7.57	90900	7100	36
RC1000	10.34	124000	9100	20
BD1000	10.00	120000	8800	36
BD1500	17.32	208000	14750	48
BD2000	19.75	237000	13600	48
BD3000	34.64	416000	29500	48
BD4000	39.50	474000	27200	48

*Belt Drive.

Table 2—Correction Factors for Suction Temperature Lower than 40°

Suction Temp. °F.	-30	-20	-10	0	+10	+20	+30	+40
Conversion factor	.76	.81	.85	.89	.92	.95	.98	1.00

Table 3—Correction Factors for Temperature Differential (Condensing Temp. — Ent. Air Temp.)

Entering Air D.B.	100	105	110	115	120	125	130
70	1.00	1.17	1.33	1.50	1.67	1.83	2.00
80	.665	.834	1.00	1.17	1.33	1.5	1.67
90	.333	.50	.665	.834	1.00	1.17	1.33
100	..	..	.333	.50	.665	.834	1.00

Table 4—Rapid Selection Chart for 'Freon-12' and 'Freon-22' (Based on 85° Entering Air)

Compr. Hp.	—30°	—15°	+20°	+40°
3	RC 150	RC 200	RC 300	2-RC 200
5	RC 200	RC 300	2-RC 200	RC 750
7½	2-RC 200	RC 500	RC 750	RC 1000
10	RC 500	RC 750	RC 1000	BD 1500
15	RC 750	RC 1000	BD 1500	BD 2000
20	RC 1000	BD 1500	2-RC 1000	BD 3000
25	RC 1000	BD 1500	BD 3000	BD 3000
30	RC 1000	BD 1500	BD 3000	BD 3000

"Select Unicon RC 1000 or BD 1000 from Table 1."

4 TABLES AID RAPID SELECTION

In order to facilitate rapid selection and elimination calculations, Kramer Trenton has prepared four tables based on entering air temperatures of 85°, 90°, 95°, and 100°, respectively, Segal explained. Table 4 shows one of these tables.

These permit the model number to be selected directly off the table to meet required suction temperature and compressor size in horsepower under the design entering air temperature.

The company also provides a tabulation of design dry-bulb temperatures for major cities in the United States.

"In general, the Unicon should be selected for a condensing temperature of 110° when using the entering air temperatures from this table," Segal advises.

"Many years of experience have confirmed this method of selection. There are only a few days in the year when the dry-bulb temperature for a given locality is above that given in the table and it is usually during a small portion of the 24-hour day. During the time when the air temperature is higher than the design figure from the table, the condensing temperature will tend to rise above the design point degree for degree.

"To illustrate, if the equipment is selected based on 90° entering air and 110° condensing temperature (20° t.d.), and the actual dry-bulb temperature rises to 95°, the condensing temperature will rise to 115°; thus the system continues to maintain a 20° T.D. For a given back pressure the capacity of the compressor will drop approximately 3½% for a rise of 5° in condensing temperature.

"The frontal area of the Unicon is so small that the radiant effect of

sunlight upon its performance is negligible compared to the total heat load handled. Therefore, the effect of sunlight on the Unicon was entirely eliminated in the calculations," Segal pointed out.

(To Be Continued)

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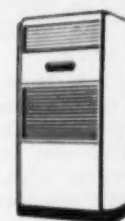
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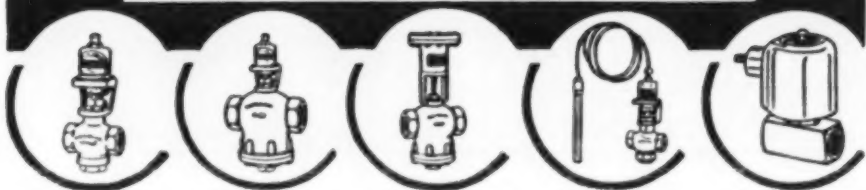
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CHEMISTS at Columbia university can now conduct experiments in their own cold room, which has an adjoining freezer for storage and research studies. S. Lewis is setting up equipment.

NEW YORK CITY—The cold room which Columbia university chemists have long desired for experimental studies has now become a reality.

For several years such a cold room had been a project of special interest to Dr. J. Enrique Zanetti who was Director of Chemical Laboratories. He was held back, however, by construction cost estimates ranging from \$20,000 to \$150,000 until he heard about the availability of prefabricated units.

The J. E. Brennan Corp., New York outlet for the Freezer Box Div. of Annapolis Yacht Yard, he was informed, would be able to furnish these units. Thereupon, with the help of Jos. E. Brennan, president of the firm, a specially insulated chamber was set up in the basement of Havemeyer Hall for the surprisingly low cost of approximately \$10,000.

Dr. Larkin H. Farinholt, who succeeded Dr. Zanetti upon the latter's retirement this year, recently was able to announce that the cold room was ready.

Here members of the Department

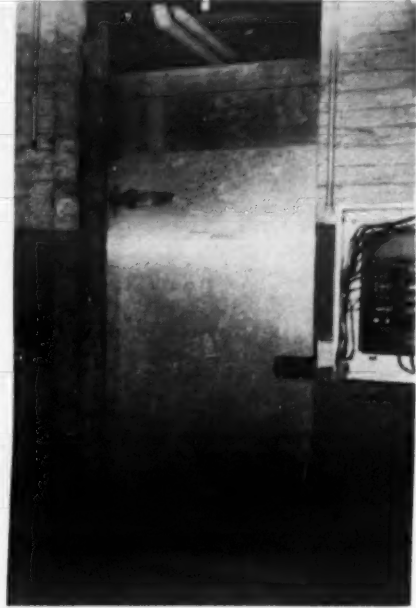
of Chemistry and the Chemical Engineering department are sharing the facilities, which were made possible by use of prefabricated Armormply insulated panels produced by the Freezer Box Div.

As one of the accompanying photos indicates, the refrigerated test room was installed completely within the existing building with virtually no structural changes. It occupies space which had served as a storeroom for outmoded laboratory equipment.

There are two rooms, actually. One, which measures 13 by 23 by 7 ft. high, approximately, is to be maintained at temperatures between 35° and 40°. Here most of the tests will be conducted.

Opening off this is a freezer and storage room about 10 ft. square and 7 ft. high. Although primarily intended for storage purposes, this room can be used for low temperature studies, points out Dr. Farinholt.

"A major field of research for which these rooms will be used is the study of enzymes and other prob-



PREFABRICATED insulated panels permitted economical installation of cold room within an old storeroom in basement of Columbia's Chemistry Department.

lems in food chemistry," he said.

Because these new facilities are limited, it is likely that their use will be confined to members of the research staff and postgraduate students, he added.

Prof. C. R. Dawson, who specializes in pure research on the biological side of organic chemistry, outlined a typical problem which he expects the new cold room to simplify, at least in some aspects.

"We have been studying ascorbic acid oxidase, which destroys vitamin C," explains Prof. Dawson. "We obtain this from squash, which we buy in large quantities when the price is lowest."

PROBLEM OF TIME IS LICKED

"Up to now, we have been faced with the problem of peeling many bushels of squash in a few hours because we had to work extremely fast at room temperature before the particular enzyme would be changed."

The over-all process here involves removing a fat containing the particular enzyme, concentrating it, and then freezing it for later studies, he said.

"The physical labor was considerable, but now, with these new facilities, we'll be able to store the squash in the freezer room and process small quantities as needed."

"Another enzyme we're studying is tryosinase, which is responsible for the darkening that occurs when many fruits and vegetables are injured," Prof. Dawson added.

Successful research on this enzyme would include learning how to control its action, he indicated. Obviously this would prove a boon to all food handlers.

"We're trying to determine the role of copper in this enzyme," Prof. Dawson said.

"Present evidence seems to show that minute quantities of metals such as copper are essential to the function of enzymes," he further commented.

TEMPERATURES WILL NOT GO BELOW FREEZING

Some of these studies will be carried out in the cold room, where the temperature can be held at any point between 35° and normal room temperature. Temperatures won't be allowed to go below freezing in this room because of the running water available in two sinks located in the larger room.

Low-side equipment for this room consists of two Kramer Trenton R210 circular blower coils mounted on the ceiling. These are connected to a 3-hp. Brunner condensing unit located just outside the cold room.

Near this unit is another Brunner, a 1½-hp. machine, that serves the Kramer Trenton Thermobank system handling the low temperature room.

Both "Freon-12" condensing units are air cooled. Special provision has been made to bring outside air into the area where the machines are located. The warm air is then discharged through louvers in a door leading to the main machinery room which is in the basement of Havemeyer Hall.

TELEPHONES PROVIDED

It is expected that four or five persons can conveniently work in the larger room at a time. Among the special features being provided are telephones in both rooms.

The telephones, incidentally, are specially fitted with small electric lights to keep them warm enough for proper operation.

Portable Air Cooling Unit

Gasoline Driven Unit with Special Reheat Coil Controls Temperatures Within 2°

NEWARK, N. J.—To provide a portable air-cooling unit which will give dependable service under variable field conditions, the Reco Products Div. of the Refrigeration Engineering Corp., New York City, designed a gasoline-driven unit which makes use of a special reheat coil to control air temperature within $\pm 2^\circ$ F. Tenney Engineering, Inc. here assisted in design of the special reheat and cooling coils.

The 26,500 B.t.u./hr. unit was originally designed for Army use in providing air-cooling for small field buildings and for communications and utility vans containing electronic equipment.

This equipment gives off considerable amounts of heat and since doors often must be kept closed—particularly in rainy weather and at night to avoid showing lights—some form of cooling was necessary for personnel comfort.

The cooling unit is mounted on a two-wheeled trailer arranged for towing by another vehicle. It can be unbolted from the trailer.

Flexible ducts supplied with the unit connect cooling equipment with space to be cooled. Over-all dimensions are 66 in. wide by 102 in. long by 62 in. high. Weight is 1,960 lbs.

GASOLINE SELECTED BECAUSE IT IS AVAILABLE IN FIELD

In designing the system, a gasoline engine was selected as the power supply because it can operate under virtually any field condition, merely requiring a supply of gasoline. The engine used is a four-cylinder (3 in. bore, 4 in. stroke), liquid-cooled, valve-in-head type which operates at 1200 to 1300 r.p.m.

To control the temperature of air supplied to the conditioned space, the cooled air is circulated around a reheat coil before being delivered to the conditioned space. Factors which cause changes in air-temperature requirements are changes in: (1) ambient temperature, (2) space occupancy conditions, and (3) operating conditions within the space. The reheat coil automatically brings the temperature to within $\pm 2^\circ$ F. of the

comfort zone, it was pointed out.

The reheat method of tempering the air temperature permits the gasoline engine to run continuously at constant speed. If other methods of modulation were employed the engine would have to run intermittently or at variable speeds, or, the flow of refrigerant through the system would have to be varied.

These alternate methods are more expensive to design, more difficult to maintain in the field and cause more wear on the engine and auxiliary components (battery, etc.) than the reheat method, it is claimed.

ENGINE RADIATOR WATER HEATS REHEAT COIL

The reheat coil, adjacent to the cooling coil, is heated by the engine radiator water. A temperature-regulated valve automatically controls the flow of hot water to the coil.

Upon a drop in temperature within the conditioned area, gas contained in a capillary thermostatic bulb is cooled and its pressure is reduced. This reduced pressure causes a diaphragm in the thermostatic regulating valve to flex.

A valve stem, connected to the diaphragm, lifts, opening the valve and increasing the amount of hot coolant flowing through the coil. If the air temperature rises, the valve closes and decreases the flow through the coil. This system for modulating the air temperature not only adds to the use of engine coolant, but also provides a cooler running engine.

COMPRESSOR DRIVEN AT CONSTANT SPEED

The refrigeration-system compressor is a two-cylinder (1½ in. bore, ½ in. stroke), reciprocating type. It is driven at constant speed and this, along with a thermostatic expansion valve at the cooling coil, maintains a constant cooling effect of the refrigerant ("Freon 12") at the coil.

Additional features of the unit include easily removable trailer sides, canvas travel cover, hand brake for parked trailer, and a retractable support to hold the trailer horizontal when disconnected.

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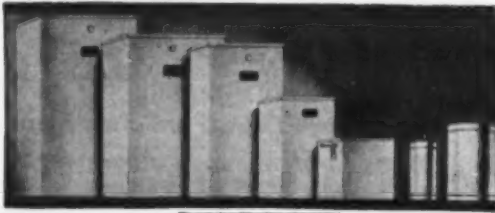
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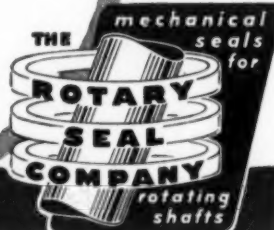
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MOTOR CONTROL



NEMA Freezer Sales Reach 369,819 In Four Mos., 84% Above 1952; 89,031 Sold In April

APRIL (26 Companies)				
Sizes	Domestic (48 States and D. C.)	Canadian	Other Foreign	Total
1. Less than 5 cu. ft.				
Chest Models	*	*	*	*
Upright Models	†	†	†	†
2. 5 and 6 cu. ft.				
Chest Models	*588	*6	*32	*626
Upright Models	†	†	†	†
3. 7 and 8 cu. ft.				
Chest Models	5,241	246	373	5,860
Upright Models	†	†	†	†
4. 9 and 10 cu. ft.				
Chest Models	1,817	102	42	1,961
Upright Models	†1,265	†80	†37	†1,382
5. 11 and 12 cu. ft.				
Chest Models	4,307	730	326	5,363
Upright Models	13,928	247	133	14,308
6. 12.5 to 17.4 cu. ft.				
Chest Models	28,876	953	123	29,952
Upright Models	5,590	1	99	5,690
7. 17.5 to 21.4 cu. ft.				
Chest Models	11,431	360	46	11,837
Upright Models	7,832	171	82	8,085
8. 21.5 to 30.4 cu. ft.				
Chest Models	1,973	114	.....	2,087
Upright Models	†1,840	†38	†.....	†1,878
9. 30.5 to 40.4 cu. ft.				
Chest Models	.....	.....	.....	.....
Upright Models	.....	.....	.....	.....
10. 40.5 to 50.4 cu. ft.				
Chest Models	.....	.....	.....	.....
Upright Models	.....	.....	.....	.....
11. 50.5 to 60.4 cu. ft.				
Chest Models	.....	.....	.....	.....
Upright Models	2	.....	.....	2
12. 60.5 cu. ft. and Over				
Chest Models	.....	.....	.....	.....
Upright Models	.....	.....	.....	.....
Total—Chest Models	54,233	2,511	942	57,686
Total—Upright Models	30,457	537	351	31,345
Total—All Models	84,690	3,048	1,293	89,031

FIRST FOUR MONTHS (26-24 Companies)

Sizes	Domestic (48 States and D. C.)	Canadian	Other Foreign	Total
1. Less than 5 cu. ft.				
Chest Models	*	*	*	*
Upright Models	†	†	†	†
2. 5 and 6 cu. ft.				
Chest Models	*4,307	*18	*235	*4,560
Upright Models	†	†	†	†
3. 7 and 8 cu. ft.				
Chest Models	26,730	1,094	1,150	28,974
Upright Models	†	†	†	†
4. 9 and 10 cu. ft.				
Chest Models	16,250	158	357	16,765
Upright Models	†5,681	†143	†285	†6,109
5. 11 and 12 cu. ft.				
Chest Models	36,621	2,313	643	39,577
Upright Models	35,409	803	226	36,438
6. 12.5 to 17.4 cu. ft.				
Chest Models	119,462	5,856	346	125,664
Upright Models	11,785	265	171	12,221
7. 17.5 to 21.4 cu. ft.				
Chest Models	57,235	1,449	213	58,897
Upright Models	23,334	520	93	23,947
8. 21.5 to 30.4 cu. ft.				
Chest Models	10,182	296	15	10,493
Upright Models	†6,096	†72	†2	†6,170
9. 30.5 to 40.4 cu. ft.				
Chest Models	.....	.....	.....	.....
Upright Models	.....	.....	.....	.....
10. 40.5 to 50.4 cu. ft.				
Chest Models	.....	.....	.....	.....
Upright Models	.....	.....	.....	.....
11. 50.5 to 60.4 cu. ft.				
Chest Models	.....	.....	.....	.....
Upright Models	4	.....	.....	4
12. 60.5 cu. ft. and Over				
Chest Models	.....	.....	.....	.....
Upright Models	.....	.....	.....	.....
Total—Chest Models	270,787	11,184	2,959	284,930
Total—Upright Models	82,309	1,803	777	84,889
Total—All Models	353,096	12,987	3,736	369,819

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Summary for April and First Four Months, 1953

Electric Farm and Home Freezers—Complete—Sales by Sizes—Units
Farm and home freezers complete with high and low side and cabinet, where 50% or more of the net cabinet capacity is designed for the freezing and/or storage of frozen foods.

*Chest Models for items 1 & 2 combined because of possible disclosure of individual company data.

†Upright models for items 1, 2, 3, 4 combined because of possible disclosure of individual company data.

‡Upright models for items 8 & 9 combined because of possible disclosure of individual company data.

Participating companies: Admiral Corp. (in 2-1-53); Bendix Home Appliance Div., Avco Mfg. Corp.; Ben-Hur Mfg. Co.; Carrier Corp.; Coolerator Co.; Crosley Div., Avco Mfg. Corp.; Deepfreeze Appliance Div., Motor Products Corp.; Frigidaire Div., General Motors Corp.; General Electric Co.; Gibson Refrigerator Co.; Hotpoint Co., Div. of General Electric Co.; International Harvester Co.; Kelvinator Div., Nash-Kelvinator Corp.; A. J. Lindemann & Hoverson Co.; Masterfreez Home Locker Mfg. Co.; Maytag Co.; Norge Div., Borg-Warner Corp.; Philco Corp., Major Appliance Div.; Quicfreez, Inc. (formerly Sanitary Refrigerator Co.); Revco, Inc.; Ryan Industries (in 7-1-52); Seeger Refrigerator Co.; Servel, Inc. (in 3-1-53); Victor Products Corp.; Westinghouse Electric Corp.; Wilson Refrigeration, Inc.

Freezer Sales--

(Concluded from Page 1, Column 3)

by March—which reached an all-time high of 111,888 units—and June and July of last year, when 98,871 units and 89,767 units were sold respectively.

The April total is 63% higher than April of last year, though it is 21% under March.

Of the April total, 31,345 freezers were uprights—or a little more than a third. This is a little higher than average for the four months period, where uprights sold represent less than one-quarter of the total.

Distributor Sales of Freezers—By States

SALES OF ELECTRIC FARM AND HOME FREEZERS—COMPLETE BY DISTRIBUTORS TO DEALERS—BY STATES

Reports were received from 20 companies

States	Units
Alabama	1,955
Arizona	616
Arkansas	1,545
California	1,025
Colorado	1,974
Connecticut	1,936
Delaware	262
District of Columbia	729
Florida	2,467
Georgia	2,919
Idaho	532
Illinois	6,245
Indiana	4,798
Iowa	3,902
Kansas	2,409
Kentucky	1,848
Louisiana	2,846
Maine	485
Maryland	1,259
Massachusetts	3,072
Michigan	5,592
Minnesota	3,060
Mississippi	1,421
Missouri	4,598
Montana	749
Nebraska	3,809
Nevada	213
New Hampshire	490
New Jersey	3,865
New Mexico	673
New York	8,769
North Carolina	2,541
North Dakota	947
Ohio	9,106
Oklahoma	3,223
Oregon	2,169
Pennsylvania	7,263
Rhode Island	447
South Carolina	874
South Dakota	998
Tennessee	1,815
Texas	8,029
Utah	794
Vermont	120
Virginia	1,739
Washington	1,661
West Virginia	952
Wisconsin	3,314
Wyoming	281
TOTAL UNITED STATES	126,336

Participating companies: Admiral Corp. (in 2-1-53); Bendix Home Appliance Div., AVCO Mfg. Corp. (in 1-1-53); Coolerator Co., Crosley Div., AVCO Mfg. Corp.; Deepfreeze Appliance Div., Motor Products Corp.; Frigidaire Div., General Motors Corp.; General Electric Co.; Gibson Refrigerator Co.; Hotpoint Co., Div. of General Electric Co.; International Harvester Co.; Kelvinator Div., Nash-Kelvinator Corp.; A. J. Lindemann & Hoverson Co.; Masterfreez Home Locker Mfg. Co.; Maytag Co.; Norge Div., Borg-Warner Corp.; Philco Corp., Major Appliance Div.; Ryan Industries (in 7-1-52); Servel, Inc. (in 3-1-53); Victor Products Corp.; Westinghouse Electric Corp.; Schaefer, Inc. (Out 1-1-53); Emil Steinhilber & Sons, Inc. (Out 12-1-52).

The unit sales figures shown on this summary are not Factory Sales nor do they reflect the sales of all manufacturers. They represent Distributors' Sales to Dealers for only those participating companies listed above.

Steel City Moves Offices

PITTSBURGH—Steel City Refrigeration Co. has moved its offices from 1024-26 Forbes St. to 214 Auburn St. The complete operation covers 15,000 sq. ft. on two floors. With this arrangement, executives can determine shop inventories more quickly, and speed up the proper inspection.

NARDA Urges Mfrs. To Make Franchises More Meaningful

CHICAGO—Members and directors of the National Appliance & Radio-TV Dealers Association, at a special closed session terminating the group's mid-year meeting, agreed that manufacturers should make their franchises more meaningful.

They discussed such alleged malpractices as special prices to dealers, sales to non-stocking outlets, and transshipping, and also considered the low profit margin on television, it was understood.

But they reportedly rejected a resolution, believed to have been proposed by Alfred H. Barrett of Stamford, Conn., president of the local appliance dealers association, urging dealers to favor suppliers whose merchandising policies are favorable to the retailer.

The suggested resolution was said to call for channeling of all sales through dealers, fair trading of merchandise where possible, an end to supplier competition with servicing dealers, and higher margins of profit on television.

The resolution was rejected, according to reports, not because NARDA members disagreed with the general thoughts expressed, but because they felt the method proposed for carrying out the resolution was the wrong way to attempt to cure industry evils.

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PART I: Design Factors

1. General
2. Capacity
3. Rating
4. Wiring

PART II: Selling Methods

PART III: Service

PART IV: Applications (Where Units Have Been Installed)

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PART I: Design

PART II: Service

PART III: Applications (Where Units Have Been Installed)

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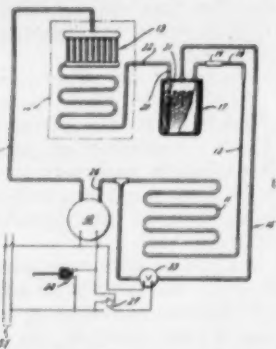
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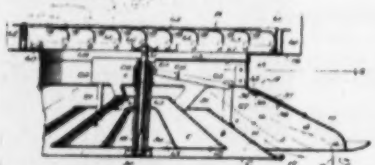
Week of February 10
(Continued)

2,627,730. DEFOSTABLE REFRIGERATION SYSTEM. Elmer W. Zearfoss, Jr., Philadelphia, Pa., assignor to Philco Corp., Philadelphia, Pa., a corporation of Pennsylvania. Application Dec. 9, 1950. Serial No. 200,019. 2 Claims. (Cl. 52-115.)



1. In a refrigeration system having compressor, condenser, restrictor and evaporator elements normally so connected that refrigerant flows through said elements in the order named whereby to vaporize refrigerant within said evaporator, means for modifying the flow of refrigerant through said system to cause condensation of refrigerant within the evaporator and consequent heating of the latter, comprising: conduit means by-passing said restrictor and operable to deliver to said evaporator hot gaseous refrigerant flowing from the compressor, to effect the aforesaid condensation and consequent heating of the evaporator; and apparatus adapted to increase the quantity of liquid refrigerant active in the system under the aforesaid modified condition of operation, said apparatus comprising a vessel with an upper portion of which said restrictor is in open communication, said vessel further being connected to said evaporator through the agency of a pipe having an opening communicating with a lower sump portion of the vessel, said vessel serving, under normal conditions of operation, to collect liquid refrigerant within said lower sump portion to a level well above the said pipe opening, and said conduit means being in communication with an upper portion of said vessel and delivering thereto, under said modified condition of operation, hot gaseous refrigerant whereby to drive liquid refrigerant contained in said accumulator through said pipe opening and into said evaporator, under the influence of pressure exerted by said gaseous refrigerant against the free surface of liquid refrigerant contained within said vessel; and means normally preventing flow of gaseous refrigerant through said conduit means and operable to establish said modified flow of refrigerant within the system by permitting flow of gaseous refrigerant through said conduit means.

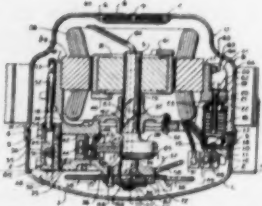
2,627,799. AIR OUTLET DEVICE FOR HEATING, COOLING, VENTILATING, OR OTHER PURPOSES. Frans J. Kurth, New York, N. Y., Leonard R. Phillips, Teaneck, N. J., and William J. Waelner, Hawthorne, N. Y., assignors to Anemostat Corp., of America, New York, N. Y., a corporation of Delaware. Application March 31, 1948. Serial No. 18,116. 7 Claims. (Cl. 98-40.)



1. A device for delivery of air into an enclosure, said device comprising a first member of hollow flaring form open at its ends for flow of air therethrough from its smaller end towards its larger end, a second member of flaring form smaller than said first member and spaced inwardly from the latter to effect lateral deflection of air flowing through said first member, and means securing said second member to said first member for longitudinal adjustment relative to the latter to vary the direction of lateral deflection of air from the device, said securing means including a threaded shaft disposed coaxially with said members, means holding said shaft against longitudinal move-

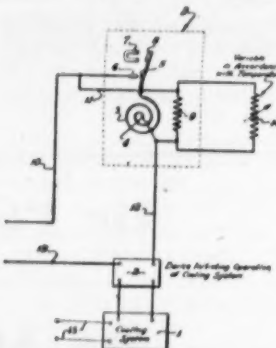
ment, a nut threaded on said shaft, means holding said nut against rotation whereby it is movable along said shaft by rotation of the latter and levers pivotally supported intermediate their ends by first member and operatively connected at their ends to said nut and said second member, respectively, whereby longitudinal movements of the former effect longitudinal adjustments of the latter.

2,628,016. REFRIGERATING APPARATUS. William H. Highman, Marion, Ohio, assignor, by mesne assignments, to Tecumseh Products Co., Tecumseh, Mich., a corporation of Michigan. Application March 5, 1946. Serial No. 652,026. 4 Claims. (Cl. 230-52.)



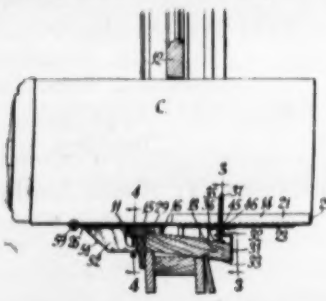
1. In a refrigerating mechanism, a sealed shell having a gaseous refrigerant inlet emptying therein; a motor-compressor unit within the shell, said motor having a stator, said compressor having a gaseous inlet and having an outlet; a tube wound around the stator and having an open end for receiving gaseous refrigerant from the interior of the shell, the other end of the tube being connected with the inlet of the compressor, said tube being arranged in intimate and direct contact with the periphery of the stator and also functioning as a muffler; and a fluid connection from the outlet of the compressor extending through said shell.

2,628,034. TEMPERATURE RESPONSIVE APPARATUS FOR CONTROLLING COOLING SYSTEMS. William A. Ray, North Hollywood, Calif., assignor to General Controls Co., a corporation of California. Application March 28, 1949. Serial No. 83,892. 2 Claims. (Cl. 236-68.)



1. In a thermostatic control for a cooling system having electrically operated means for initiating the operation of the system; a thermostat affected by the temperature of the space to be cooled; contacts controlled by the thermostat for operating said initiating means; electrical heating means for the thermostat wholly connected across the contacts; the combined resistance of the heating means and the initiating means being effective, unless the contacts be engaged, for maintaining said cooling system inactive; and means responsive to variations in outdoor temperature to increase the heat generated by the heating means as the outdoor temperature increases.

2,628,052. SUPPORTING PLATFORM FOR WINDOW TYPE ROOM AIR CONDITIONERS. James W. Cira, Sloan, N. Y., assignor to Fedders-Waligan Corp., Buffalo, N. Y. Application July 7, 1951. Serial No. 235,651. 2 Claims. (Cl. 248-236.)

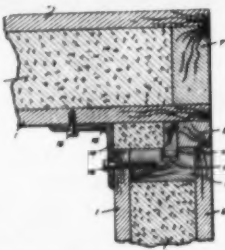


1. A supporting platform for mounting a room cooler in a window opening comprising an H-shaped frame having spaced parallel side rails interconnected by a transverse plate, a depending flange on the plate adapted to abut the edge of a window sill, and thereby position said rails with portions extending inwardly and outwardly of the window, depressed portions formed on said rails, along the inner and outer ends thereof, said depressed portions being formed with a

plurality of bolt holes, side and end flanges on the outer portions of the rails to provide positioning and retaining means for a room cooler, laterally extending adapter beams having slotted portions positioned under the outer depressed portions of the rails, bolts extending through said slotted portions and one of said bolt holes to connect said beams and rails, clamping members adapted to be positioned around the outer portion of a window ledge and having threaded posts adapted to engage the ledge at one end and to project upwardly therefrom, additional bolt receiving apertures formed in the adapter beams and adapted to encircle the posts, nuts on the posts adapted to engage opposite faces of the beams, and additional clamping members adapted to be connected to and under the inner depressed portions of the rails, said additional clamping members including adjustable screws adapted to engage the under surface of a window sill.

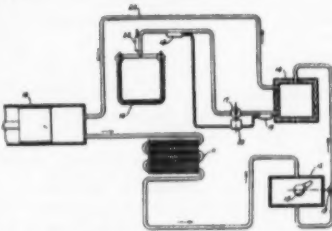
Week of February 17

2,628,388. REFRIGERATOR CONSTRUCTION. John Poth, Mount Vernon, N. Y. Application April 3, 1951. Serial No. 218,972. 5 Claims. (Cl. 20-2.)



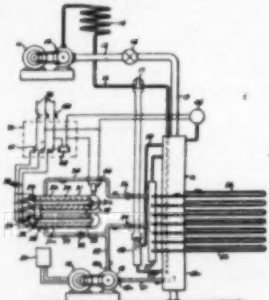
1. In a refrigerator construction having a vertical panel and a horizontal panel secured together to form a corner joint, said panels each comprising spaced inner and outer sheets of sheathing, said vertical panel including a runner having a horizontal surface forming an end surface of said panel, in combination, a runner interposed between said panels and secured to one of said panels, said runner being of a thickness substantially less than the thickness of the vertical panel and engaging a portion only of the end surface of said vertical panel and forming a space of substantial volume between the remainder of the end surface of said vertical panel and the opposed surface of said horizontal panel, and insulating material packed in said space.

2,628,478. METHOD OF AND APPARATUS FOR REFRIGERATION. Elmer W. Zearfoss, Jr., Philadelphia, Pa., assignor to Philco Corp., Philadelphia, Pa., a corporation of Pennsylvania. Application Dec. 13, 1949. Serial No. 132,766. 14 Claims. (Cl. 62-3.)



11. In a refrigeration system comprising a compressor; a condenser; a storage tank; an expansion chamber; said expansion chamber being insulated to prevent substantial heat exchange between the contents of said chamber and the medium surrounding it; and an evaporator, said compressor, condenser, tank, chamber and evaporator being disposed in flow circuit, first valve means disposed between said storage tank and said expansion chamber and arranged so as to open in response to accumulation of a predetermined quantity of liquid refrigerant derived from said condenser and to admit into said expansion chamber said quantity of liquid refrigerant; conduit means connecting said expansion chamber to the suction side of said compressor; second valve means disposed between said expansion chamber and said evaporator; a pair of temperature sensitive elements disposed to sense, respectively, the temperature of the contents of said expansion chamber and of said evaporator; control means responsive to said temperature sensitive elements and effective to close and maintain closed said second valve means when the temperature of the contents of said expansion chamber exceeds the temperature of the contents of said evaporator by at least a predetermined differential, and to open, and maintain open, said second valve means when the temperature of the contents of said expansion chamber exceeds the temperature of the contents of said evaporator by less than a predetermined differential.

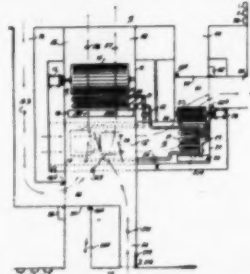
2,628,479. DEFOSTING SYSTEM. Felix W. Powers, Pasadena, and Albert Lundin, Huntington Park, Calif.



1. In a refrigerating system including a compressor normally forcing refrigerant vapor under pressure through a condenser where it is cooled and condensed to the liquid phase and then discharged into a refrigerant liquid tank under reduced pressure from which it is pumped by a liquid pump to a liquid distributor header from which it is circulated through cooling coils back to the refrigerant liquid tank, the combination of: liquid heating means interposed between the liquid pump and the liquid distributor header adapted to elevate the temperature of the liquid refrigerant circulated through the cooling coils to melt accumulated ice and frost thereon; an inlet conduit connecting

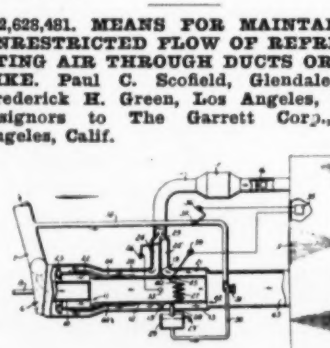
said liquid heating means and the outlet of the liquid pump; an outlet conduit connecting said liquid heating means and the liquid distributor header; and valve means controlling the flow of refrigerant liquid from the liquid pump through said inlet conduit through said liquid heating means and said outlet conduit to the liquid distributor header.

2,628,480. COMBINATION REFRIGERATION AND EVAPORATING COOLING UNIT. Archie S. Feinberg, Dallas, Texas.



5. In an air conditioning apparatus: a refrigerating system comprising a pair of heat exchange elements, a first duct means communicating with a conditioned space, a second duct means communicating with the outdoor atmosphere, a first damper means for closing off said first duct means, a first blower means for drawing air from said conditioned space through said first duct means and from the outdoor atmosphere through said second duct means to form a primary mixture, said first blower means moving said primary mixture over one of said heat exchange elements and into said conditioned space, said primary mixture being cooled in its passage over said one of said heat exchange elements, spray means for spraying water over the other of said heat exchange elements, a second blower means for drawing air from the outdoor atmosphere over the other of said heat exchange elements, and a third duct means communicating with the outdoor atmosphere for moving the air drawn by second blower means back to the outdoor atmosphere; an evaporative cooling system comprising said second blower means, said spray means, and a fourth duct means for moving the air drawn by said second blower means through the water sprayed by said spray means to said conditioned space; second damper means associated with said third and fourth duct means, said second damper means closing off said third duct means when in one position and closing off said fourth duct means when in a second position, said first and third duct means being open when said refrigerating system is in operation and being closed when said evaporative cooling system is in operation, said first blower means operating during the operation of said evaporative cooling system and during the operation of said refrigerating system; a first motor means for operating said first damper means, a second motor means for operating said second damper means, and means responsive to the temperature and humidity conditions of the outdoor atmosphere for placing said refrigerating system in operation when predetermined values of temperature and humidity of the outdoor atmosphere are exceeded and for placing said evaporative cooling system in operation when said predetermined values are not exceeded, said last mentioned means controlling said first and second motor means to close said first and third duct means when said evaporative cooling system is placed in operation and to open said first and third duct means when said refrigerating system is placed in operation; and means responsive to the movement of said second damper means for stopping operation of said second blower means when said damper means is being moved from one position to another.

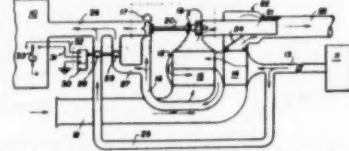
2,628,481. MEANS FOR MAINTAINING UNRESTRICTED FLOW OF REFRIGERATING AIR THROUGH DUCTS OR THE LIKE. Paul C. Scofield, Glendale, and Frederick H. Green, Los Angeles, Calif., assignors to The Garrett Corp., Los Angeles, Calif.



19. In combination with an air refrigerating system for introducing refrigerated air into a compartment and including a refrigerating means operative to reduce the temperature of air delivered thereto, said means having a discharge duct: a cold air duct axially aligned with

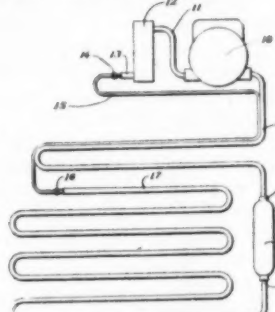
said discharge duct and having an end surrounding the same in spaced relation thereto to provide a first annular air passage therebetween, said cold air duct receiving and conducting cold air discharged by the refrigerating means; an outer air duct surrounding said cold air duct in spaced relation thereto and having an end communicating with the interior of the compartment through which air discharged from the refrigerating means can enter the compartment, one end of said cold air duct cooperating with said discharge duct to define a first annular ejector-mixer therebetween, said outer duct cooperating with the other end of said cold air duct to define a second annular ejector-mixer therebetween; a partition between said cold air duct and said outer duct and disposed between said first and second ejector-mixers and dividing the space between said cold air duct and said outer duct into two annular passages, the first of said passages leading to said first ejector-mixer and the second of said passages leading to said second ejector-mixer; a warm air conduit having a first branch communicating with said first passage and a second branch communicating with said second passage, warm air in said passages being adapted to flow into the cold air stream at said ejector-mixers, the warm air entering said cold air duct through said first ejector-mixer imparting to any ice particles within said cold air duct the latent heat of fusion capable of melting the particles; a water separating means disposed in said cold air duct between said first and second ejector-mixers and adapted to remove water formed by said melting process so as to dehumidify the air entering the compartment; and a valve in said warm air conduit operable in response to variations in the temperature of the air in said cold air duct, upstream from said water separating means, for controlling the amount of warm air passing through said branches.

2,628,482. AIR CONDITIONING MEANS FOR ENCLOSURES. Glenn A. Burgess, Lynwood, Calif., assignor to The Garrett Corp., Los Angeles, Calif.



1. Air conditioning means for an enclosure, comprising: a flow path for conducting conditioning air to said enclosure; means in said path for bringing the conditioning air into heat exchange relation with a coolant; means for converting energy of the conditioning air into mechanical energy; air circulating means driven by said energy converting means; means actuated by air from the air circulating means for inducing flow of said coolant; a by-pass duct for flow of conditioning air around the heat exchange means and the energy converting means; a separate by-pass around the energy converting means; and valve means for proportionally controlling the air flow in said by-passes in response to temperature variations within said enclosure.

2,628,484. COMBINATION DRIER AND RESTRICTOR FOR REFRIGERATION SYSTEMS. Russell W. Ayres and Donald F. Swanson, St. Paul, Minn., assignors to Seeger Refrigerator Co.



1. A refrigerant system including a compressor, a condenser connected thereto, an evaporator, and a combined restrictor and drier unit connected between the condenser and the evaporator, said unit forming the sole means of restricting the passage of refrigerant to the evaporator, and a suction line connecting the evaporator and the compressor, said unit comprising an elongated chamber of a diameter smaller than the internal diameter of the suction line, said chamber containing material capable of absorbing moisture, the small diameter of the chamber and the obstruction created by the moisture absorbing material combining to create sufficient pressure drop between the ends thereof to obviate the necessity of further restriction.

(To Be Continued)

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OFF THE CHEST

HAYES USES STAINLESS STEEL HEAT EXCHANGER

Hayes Furnace Mfg. & Supply Co.
2929 South Fairfax Ave.
Los Angeles, Calif.

Editor:

There has been a great injustice done to the Hayes Furnace Mfg. & Supply Co. in your issue of June 8. In the article "Factors In Figuring Home Cooling Load" by Lee A. Miles, sales manager, L. J. Mueller Furnace Co., on page 21, column 5, lines 12 and 13, there appears this statement:

"No furnaces built today have stainless steel heat exchangers."

Hayes Furnace Co. became nationally known when it launched an advertising campaign shortly after the World War when steel became plentiful in 1946. Prior to that time Hayes furnace sales were restricted to California.

A recent ruling of the American Gas Association permits installation of stainless steel heat exchangers downstream of refrigeration cooling coils when recommended by the manufacturer. To do this safely, the heat exchanger must be constructed of stabilized stainless steel. Hayes Furnace Co. uses only this type (321) of stainless steel.

To correct this innocent and erroneous statement we believe that a proper and fitting correction should be published.

JAY P. ESSEK

MORE INFORMATION?

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AMANA CORRECTS HOME FREEZER INFORMATION

Amana Refrigeration, Inc.
Amana, Iowa

Editor:

It has been discovered that there are a few errors in the specifications of our freezers as listed in your May 25 issue.

The Model 12 freezer is an upright, rather than a chest as indicated, and the three upright models namely 12, 18, and 25B do not have interior lights.

Will you kindly make these corrections so that on whatever reprints you may make of the printed specifications, the correct information will appear.

WALTER A. WENDLER,
Assistant Sales Manager

ARE SOLUTIONS TO OIL PROBLEM THE SAME?

Frigidaire Sales Corp.
Buffalo, N. Y.

Editor:

Some time ago there appeared in one of your issues a report on a refrigeration contractor in Michigan (Grand Haven, I believe) who contrived an ingenious method of getting the oil to return from a dimpled plate coil operating as a flooded evaporator.

We have been faced with a somewhat similar problem and have arrived at a solution which will probably be satisfactory; however, we



PROCUREMENT INFORMATION

The following is a list of proposed procurements issued by the various indicated U. S. Government procurement offices. This list is compiled and made available daily on a free pick-up basis. Prospective bidders may obtain complete bid sets by a request to the purchasing officer under which the purchase is listed in this Synopsis. Be sure to identify completely the bid invitation you wish by including in your request the item description, the invitation number or reference number and the opening date. This will save time in filling your request. For reasons of economy, specifications are normally not included with the bid invitations unless the specification is a new one. First time bidders on a particular item should request a copy of applicable specifications and drawings at the time the request for a bid is made.

DEPARTMENT OF DEFENSE

Description	Quantity	Invitation No.	Opening Date
Galveston District, Corps of Engineers, P.O. Box 1229, Galveston, Texas			
Const. of Dental Clinic, Laredo AFB, Tex. Work to consist of wood frame const. w/floor area approx. 4369 sq. ft. incl. utilities, walks & parking areas, the bldg. is to be air conditioned w/forced warm air heating system.	Job	(ENG-41-243-54-9B)	13 Aug 53
Louisville District, Corps of Engineers, U. S. Army, P.O. Box 59, Louisville 1, Kentucky			

would like to review the article referred to above. Could you advise as in which issue this article appeared and where a copy of it would be available.

C. F. RAMING

Dear Mr. Raming:

The story on the method of getting oil to return from a dimpled plate coil was published on page 8 of the Dec. 18, 1950 issue of AIR CONDITIONING & REFRIGERATION NEWS.

A copy of the story is enclosed.

Editor

Servel 'Salesman of Distinction' Contest Won by Jack Spohn

EVANSVILLE, Ind. — Jack Spohn of Cook Appliances, Inc., Minneapolis, won the "Salesman of Distinction" contest conducted by David K. Patterson, sales promotion manager of Servel, Inc. Runner-up is Walter Govin, also of Cook Appliances.

The contest was held in connection with a special electric Wonderbar sales campaign. The Wonderbar is a portable refrigerator that was introduced by Servel to widen the uses of home refrigeration.

Spohn finished far over his quota of Wonderbar sales. He won both the national and western sales region prizes.

His prizes include an all-expense trip to New York for himself and his wife, the National Salesman of Distinction Trophy, a Wondercase of Lord Calvert whisky, a full case of Lord Calvert whisky, an electric Wonderbar, a choice of a Wondercart or Wondercabinet and eight monogrammed silver tumblers.

Other regional winners are: eastern region—Maurice Cloutier of Tracy & Company, Providence, R. I.; southern region—Anthony A. Walsh of W. L. Roberts, Inc., Memphis; midwestern region—Sidney Helper of Main Line Cleveland; Pacific region — R. C. Franks of Fannin Gas & Equipment Co., Phoenix, Ariz.

Sales representatives with 50% over quota who won a Wondercase of Lord Calvert whisky, a full case of Lord Calvert, and an electric Wonderbar are: Larry Parr of Zerega Distributing Co., Seattle; Sidney Helper of Main Line, Cleveland; and W. L. Johnston of Ekstrom United Supply Co., Joplin, Mo.

Other representatives over quota were: W. McGregor, Emerson Radio, Washington, D. C.; Jack Hart, Wholesale Supply Co., Portland, Ore.; T. E. Clements, Tracy & Co., Providence, R. I.; T. E. Lipscomb, United Distributors, New Orleans; W. Lutz, Major Distributors, Wilkes-Barre, Pa.; R. Schuh, Cook Appliances, Minneapolis; J. Reis, Associated Distributors, Indianapolis; A. Francey, Jr., Tedesco, Inc., Syracuse, N. Y.; T. E. Quigley, Tracy & Co., Providence; and R. B. Jones, Van Zandt Supply Co., Huntington, W. Va.

Hampel Leaves Odin Stove To Become Mfrs.' Agent

ERIE, Pa.—E. K. Hampel has announced his resignation as vice president in charge of merchandising for Odin Stove Mfg. Co.

Hampel plans to devote his entire time to the merchandising and sale of major appliances and related products as a manufacturers' representative in the Great Lakes area.

Dehumidification of seven pumping plants in the city of Louisville, Ky. (CIVENG-15-029-53-142B) 21 Jul 53

CONTRACTS AWARDED THROUGH JULY 6

Signal Corps Photographic Center, 35-11 35th Ave., Long Island City 1, New York

Installation of chilled water air conditioning system and acoustical treatment for soundproofing of Stage "F" and adjacent rooms for TV Studio, recording and Monitoring Facilities, Building No. 2.—Job, \$62,190.—Quinn & Feiner, Inc., 446 W. 38th St., New York 18, N. Y. Prime contractor has subcontracts open for the following: Plumbers, Sheetmetal Workers, Asbestos Workers, Ironworkers, Structural Carpenters, Plasterers, Electricians, Laborers, Bricklayers, Roofers, Lathers.

Officer in Charge of Construction, Potomac River Naval Command, U.S. Naval Gun Factory, Washington 25, D. C. Air conditioning systems, building 2200, Naval Hospital, Quantico, Virginia. NOY-76580.—Job, \$39,771.—Koolair Co., 3240 Prospect Ave., N.W., Washington 7, D. C.

Louisville District, Corps of Engineers, U.S. Army, P.O. Box 59, Louisville 1, Kentucky

Const. of air conditioning bldg., 208 and 215 at Jefferson Proving Ground, Madison, Ind.—Job, \$121,626.—Freyn Bros., Inc., 1025 N. Illinois St., Indianapolis, Ind.

Purchasing and Contracting Office, 3800th Air University Wing, Maxwell Air Force Base, Alabama
Installation of ventilating fans in a selected group of buildings, Maxwell Air Force Base, Alabama. 01-600-53-109.—Job, \$48,532.—Carr and Rothchild, 934 S. McDonough St., Montgomery, Alabama.

CLASSIFIED ADVERTISING

RATES for "Positions Wanted" \$5.00 per insertion. Limit 50 words. 10¢ per word over 50.

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VERSATILE SALES representative or service manager. Need someone to spark your sales force, or solve your service and field engineering problems? My more than 20 years' experience in the branch sales and service departments of such leaders as Norge, Frigidaire, Kelvinator, and Copeland—and operation of own refrigeration service organization—may be just what you need. Accredited Refrigeration Engineer—graduate of Chicago Engineering Institute, granted 16 refrigeration patents. 41 years young. Will travel anywhere. Let's talk it over at your convenience. LOUIS L. FEENEY, 1827 So. Bronson Ave., Los Angeles 19, Calif. Phone REpublic 3-6322.

APPLICATION ENGINEER—4 years' experience, varied applications of refrigeration and air conditioning equipment. Familiar with subcontracts and contracting; training sales personnel in application and selection of equipment on distributor level. Interested in position utilizing experience and background. Married. Available Sept. 1. Write BOX 4339, Air Conditioning & Refrigeration News.

POSITIONS AVAILABLE

REFRIGERATION MANUAL writer—Progressive Chicago appliance manufacturer has opening for a technical writer to prepare service and operating manuals for household electric refrigerators, room air conditioners, freezers, and other major appliances. Experienced writer preferred, but will give full consideration to person with sound knowledge of refrigeration service practices and the ability to express ideas clearly and concisely on paper. Permanent position. Submit resume of experience and salary requirements. ADMIRAL CORPORATION, 3800 W. Cortland St., Chicago, Illinois.

ENGINEER WITH ability to take charge of production in the manufacturing of ice cube machines. A real position for a top-flight person with a progressive organization. Position in twin cities. Please furnish complete information on qualifications and desired salary. Your present employer will not be contacted. BOX 803, MINNEAPOLIS ATHLETIC CLUB, Minneapolis, Minnesota.

DETROIT REFRIGERATION Jobber requires an experienced counter man. If you have the experience we will pay you top wages. Excellent working conditions. Replies will be held strictly confidential. State full details on experience and availability. BOX 4321, Air Conditioning & Refrigeration News.

EQUIPMENT FOR SALE

CARRIER REFRIGERATION: Used Centrifugal Refrigerating Machine, Model 17-

M, size 42, applicable to all refrigeration and air conditioning requirements, maximum 240 tons, direct connected to Murray low-pressure steam turbine. Can be used for various capacities and temperatures. Complete unit; excellent condition. Can be purchased at a saving of 50% of its new cost. Can be arranged for motor drive. DENNY & CLARK, 1923 W. North Ave., Chicago 22, Ill.

40-TON FREON 12 air conditioning unit—used 3 seasons—perfect condition—York 3 1/2" x 3", 8 cylinders, W type, 5075 unloading compressor, York EQV7 economizer with motors and starters. 3 McQuay DX coils operated at 6,000 CFM. Miscellaneous valves, receiver, heat exchanger, drier, etc. Contact Mr. David G. Roessler, Chief of Maintenance, THE KAHLER CORPORATION, Rochester, Minnesota, for further information.

BRAND NEW, latest model Compressors up to 5 hp. at tremendous savings! Sealed units—1/4 hp. @ \$45; 1/2 hp. @ \$55; 3/4 hp. @ \$70. Model S64 1/2 hp. domes (motor compressor assemblies) @ \$33. Also 1/4 hp. DC and 25 cycle AC open-type. Quantities limited, so act now! MANN REFRIGERATION SUPPLY CO., 440 Lafayette St., New York City, Gramercy 3-8000.

6 LOUDON (Scotsman) fully automatic ice cubers used six months or less on rental plan. Due to Chicago water conditions necessary to replace. Original cost \$475.00. Will sell at \$175.00. Powered by 1/2 hp. A.C. Coplomatic unit. Contact NORTHLAND REFRIGERATION SALES CO., 1823-25 S. Kedzie Ave., Chicago 23, Illinois for information and literature.

200 BRAND new prominent brand thermostatic expansion valves, 1/2 to 1-ton capacity. Freon. Guaranteed. \$4 each. FRANK REUBEN, 812 Lexington Avenue, New York City.

ATTENTION SERVICEMEN — Send for our 1953 Catalog. Relays, expansion valves, controls, dehydrators, V belts, open & hermetic units. All new merchandise at great savings up to 50%. Sold on Money Back Guarantee. WALTER W. STARR REFRIGERATION, 2833 Lincoln Ave., Chicago 13, Illinois.

FRANCHISES WANTED

ACTIVE PENNSYLVANIA distributor with high financial rating is interested in adding nationally-accepted beer dispensing equipment to their line. Send full particulars and literature pertaining to above to BOX 4336, Air Conditioning & Refrigeration News.

BUSINESS OPPORTUNITIES

FOR SALE: Good, going refrigeration sales and service business, home combined. No overhead. \$10-\$15,000 yearly average. 7 large rooms, gas heat, 20' x 20' equipped shop, and truck. Price of business if sold separately, \$5,000; together, \$27,000. Call or write PETE KALATA, Warren Avenue, Downers Grove, Illinois. Phone 2959.

FOR SALE: long-established wholesale and retail refrigeration business located in Detroit, Michigan, grossing over \$60,000 per year. Yours completely equipped for only \$8,500. Write BOX 4340, Air Conditioning & Refrigeration News.



by James J. LaSalvia

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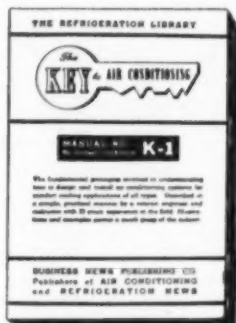
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MANUAL NO. K-1—The physics of air conditioning; use of charts; methods of ventilation; figuring air requirements; refrigeration problems in air conditioning; use of fans; methods of air distribution. Psychrometric chart included with book.

MANUAL NO. K-2—Sheet metal ducts (sizing methods, problems of design); discussion of air cleaning devices; heat transmission coefficients; problems and tables for figuring heat gain; air through cooling coils; selection of cooling coils, expansion valves, compressors, and water cooling coils.

MANUAL NO. K-3—General discussion of heating systems; selection of heating coils (air friction, condensation); description and operation of evaporative condensers; water cooling towers; automatic controls; piping refrigerant, water, and steam; and insulation problems.



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July 15 Hearing Set For Detroit Auto Cooling Code Change

DETROIT—The Detroit Common Council has set next Wednesday, July 15, as the hearing date on the proposed change in the city's refrigeration safety code that would exclude automobile air conditioning from its coverage.

The hearing will begin at 10:30 a.m. in the chambers of the Common Council.

It was requested by the Refrigeration and Air Conditioning Contractors Association of Detroit, which is opposed to the change.

The elimination of automobile air conditioning from the code was proposed by Joseph P. Wolff, commissioner of the city's department of buildings and safety engineering, which has the responsibility for enforcing the code. Wolff contends that the code was never meant to cover automobile air conditioning.

In this, he has the support of automobile manufacturer and dealer groups.

The refrigeration contractors see no reason why the code should not be applied to automobile air conditioning. They contend that the same public safety factors are involved as in any other type of refrigeration installation. They also believe that exempting automobile air conditioning will lead to an eventual breakdown of the code.

They are supported in their stand by the national Refrigeration and Air Conditioning Contractors Association.

Regal Plastic To Move to New Kansas City Location

KANSAS CITY, Mo.—Regal Plastic Co. here has leased 30,000 sq. ft. in the A. J. Stephens building, and plans to move its entire operation to the new location at 14th and Chestnut about July 15.

Rapid expansion of its plastic fabrication operations made necessary the move from the firm's present location at 710 Main.

Occupancy of the remaining 20,000 sq. ft. of the building, now used for storage of Federal agency records, is expected by Regal sometime in 1954, according to Jerome S. Kivett, president of the company.

Regal Plastic, whose original production was limited to several items of plastic furniture, now does a nationwide business, manufacturing plastic industrial parts, carrying cases, refrigerator door sections, airline serving trays, air conditioning components, and many parts for airplanes themselves.

The present Regal payroll of near 100 persons, will be almost doubled.

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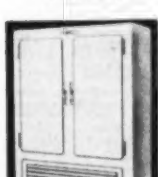
La Crosse Self-Contained Bottle Cooler



Bluebird Bottle Cooler—Remote

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American Standard Viking Air Conditioning Names Rafferty Plant Mgr.

(Concluded from Page 1, Column 2)
are Thomas W. McNeill, president; H. M. Carnahan, vice president, sales; and Frank P. Weil, vice president, manufacturing.

McNeill moved to his new position from the post of vice president, purchasing, of American-Standard. He has been associated with the company since 1923, with wide experience in administrative work.

Carnahan has specialized in sales work since the beginning of his association with American-Standard in 1935. He has served as sales manager of the company's warm air heating department since its creation in 1951.

Weil has held responsible positions in the manufacturing field with American-Standard since 1927. For the past nine years he has served as manager of the company's Elyria plant, which produces air heating and cooling equipment and is now the major production center of the new division.

Fedders Air Conditioning Sales For May Quarter Close To Last 6 Months

BUFFALO—With room air conditioners accounting for about 60% of the company's total business, Fedders-Quigan Corp. reported sales totaling \$18,426,629 for the quarter ending on May 30.

This figure nearly equaled that of the previous six months (ending Feb. 28), bringing the total for the nine months period to \$37,433,574. No comparisons with last year can be made, Salvatore Giordano, president of the company, said, because Fedders is changing its fiscal year to end on Aug. 31 instead of Dec. 31 as previously.

However, Giordano asserted that sales for the full fiscal year are expected to be substantially higher than in any previous 12-month period.

Fedders-Quigan also makes automobile radiators and heater cores, whose sales were also up in the quarter ending May 30.

For the nine months ending May 30, net income, after taxes, was \$1,016,691, or 65 cents per share.

F. H. Miller Appointed To Represent Worthington

HARRISON, N. J.—F. Hommer Miller has been appointed Grand Rapids, Mich. resident sales engineer and representative for Worthington Corp., it was announced by T. J. Kehane, assistant vice president and general sales manager.

Miller, a graduate of Drexel Institute of Technology, Philadelphia, joined Worthington in 1942 as a test engineer at Harrison. In 1946 he became an application engineer in the Centrifugal Pump Div. and the next year he transferred to the New Jersey branch sales office as office engineer and office manager.

CLEVELAND — Appointment of James S. Rafferty as plant manager of Viking Air Conditioning Corp. was announced recently by Marion I. Levy, Viking president.

Rafferty was formerly projects and methods supervisor for the Tinnerman Products Co. here. In 1951, he drew national attention for supervising the transfer of the Tinnerman plant to a new location without loss of production time.

Rafferty will supervise and coordinate the expansion of the Viking plant to accommodate increased production and new products including room air conditioners and dehumidifiers, Levy said.

Savannah Dept. Store Will Add 3 Air Conditioned Floors

SAVANNAH, Ga.—Levy's of Savannah, Inc., local department store, has just announced plans for the construction of a three-story addition to the present store. It will be air conditioned throughout, and the present store will be completely remodeled, according to Henry E. Goldberg, president.

"Our spacious new structure is expected to be completed and ready for occupancy by April 1, 1954," Goldberg stated. "It will take in the entire block on Broughton St. running from Abercorn to Lincoln St. Olaf Otto has the contract."

Cost of the new store is expected to run in excess of a million dollars.



HUMIDITY WATCHDOG—This Frigidaire electric dehumidifier is part of the equipment at the world's highest television station, XEQTV, which is perched on a mountain peak, 19,000 ft. high near Mexico City. Shown inspecting the dehumidifier at the station, left to right, are: J. J. McIntyre, treasurer of the General Motors organization of Mexico City; Henry Carlsson, executive assistant, and V. A. Moore, managing director.

World's Highest TV Station Solves Moisture Problem with Dehumidifier

MEXICO CITY — Man's battle against high humidity is being waged successfully on many fronts—in cities, factories, farms, laboratories, and homes. And now a new realm has been conquered, this time one high among the clouds in Mexico.

A Frigidaire electric dehumidifier provides constant humidity control in the world's highest television station, XEQTV, which occupies a precarious perch on a mountain peak nearly 19,000 ft. high, near this busy city. The cloud-sweeping Mexico City

telecasting station was erected to offset limited reception in the surrounding area.

When the station first went into operation, engineers discovered that a moisture problem was very much in evidence, despite the high altitude. Excessive moisture in the air can impair the operation and shorten the life of delicate instruments and sensitive equipment.

A Frigidaire electric dehumidifier was installed by the General Motors Organization of Mexico.

Air Conditioning 10 STORIES UP!

Quiet operation is all-important when you're conditioning office space 10 stories up (and going higher), as in the Empire State Building. With basement space at a premium, units must be located in conditioned areas. Naturally, noise is taboo. Bush horizontal air handling units provide the silent answer. Why not consider the Bush line in your next air conditioning problem. Catalog No. 425 contains complete specifications. Request copy on letterhead.



Consulting engineers for office areas in Empire State Bldg. conditioned by Bush units were Meyer, Strong & Jones. Contractors—York Distributors Inc., L. I. City, New York, and J. L. Murphy, Inc.

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